Turlock General Plan

1992-2012

City of Turlock

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Section 1
Overview

The Turlock region's first known inhabitants were the Yokut people, the most widespread group of California Indians. Spanish explorers first began arriving in the area around 1806. By 1840, most of the Indian population had been decimated due to disease, and the violence brought by white settlers.

The first white pioneers settled along the banks of the Tuolumne and San Joaquin rivers. The Gold Rush was directly responsible for the settlement of the region, attracting miners, traders, and persons in an array of other businesses meeting the needs of a growing community.

The construction of the Southern Pacific Railroad, begun in 1871 and completed in 1888, transformed the Central Valley; Turlock was founded in the first year of its construction. The Railroad, which served as a means to transport large wheat crops to markets in Stockton and beyond, was a blessing for the economically distressed region languishing from the demise in 1867 of the cattle range.

Turlock has had a long history of planning. A general plan for the City was prepared in the early 1950s, and although it was never adopted, it served as a point of departure for future plans. The General Plan prepared in 1969, much before general plans acquired their present political and legal stature, addressed such contemporary issues as urban sprawl and unnecessary destruction of farmland, and was updated in the early 1980s.

The present effort, begun in 1990, represents a continuation of this planning tradition. In response to the City's needs and California law, the 1992 Turlock General Plan (as amended by its 2002 review), through text and diagrams, describes the City's ideas for its future and the ways in which it intends to transform these ideas into reality. The General Plan's elements reflect six overall themes.

1.1 GENERAL PLAN THEMES

1.1-a **Establishing limits to urban growth that will maintain Turlock as a freestanding city surrounded by productive agricultural land**. The City's identity, history, and economy derive from its site in the center of one of the richest agricultural regions in the country. Orchards, dairy operations, and row crops are found in the Turlock area in a complex pattern created by relatively small holdings of land and excellent conditions for production of a variety of commodities. Agricultural industries in the City process the products of nearby farms, as well as poultry raised in the foothills. Policies throughout the General Plan are intended to support continued agricultural production and industry while also providing for continued diversification of the City's economic base.

1.1-b **Maintaining an economically and socially diverse population by promoting a greater variety of housing types citywide and a localized mix of housing types in some areas**. Like preservation of agricultural land, lack of affordable housing is a problem throughout California, not just in Turlock. Turlock residents come from many different household structures, circumstances, and income groups, and the General Plan calls for a more diverse housing stock to allow opportunities for all. Elderly persons, students, single-parent households, adults sharing housing, multifamily households and multigenerational households where adult children live with their parents are household types that evolve from economic need or personal preference. This wide range of household types deserves a wide range of housing. Mixing housing types in localized areas will contribute to an economically and socially integrated city.

1.1-c **Providing commercial and industrial sites consistent with Turlock's growth.** The City's economic development and population growth are intertwined in a complex relationship. With a population of 57,756 in 2001, and a projected 2012 population of approximately 83,000, the City will be able to support a wider variety of retail stores and services, including some not available at present. Increased industrial activity and growth in other economic sectors will be needed to sustain a healthy economy and, perhaps more importantly, maintain the relationship between jobs and housing that offers many opportunities to City residents.

1.1-d **Fostering development that offers alternatives to auto use, especially for non-commute trips**. Turlock's level topography makes it ideal for pedestrians and bicyclists. Yet many of the City's subdivisions built create circuitous routes that add distance to trips. Bicycle routes do not cover the whole City, and outside of Downtown, shopping areas are frequently unwelcoming to anyone not in a car. General Plan policies counter these trends by calling for the renewed use of traditional neighborhood street patterns and more provisions for bicycle use. Related policies encourage neighborhood-based stores and shops that will reduce distances, making walking more appealing.

1.1-e **Creating an economic and social balance among different city sectors**. At community workshops, Turlock residents spoke about perceived distinctions between different parts of the City. With many relatively high-priced homes added in north Turlock, the neighborhood distinctions that have been felt for some time may have intensified. The City's southern neighborhoods are closer to the freeway, the sewage treatment plant, and to industry, factors which have tended to make these locations less appealing. The continued presence of unincorporated "islands" in the southern part of the City means that some areas have never been required to conform to City regulations and standards. The Plan balances development in the different parts of the City by promoting growth to the southeast as well as to the north, by identifying opportunities for infill development, and by calling for annexation of all county islands.

1.1-f **Managing growth to implement General Plan policies and enhance Turlock's quality of life.** After extensive community debate and deliberation by the City's decision-makers, Turlock adopted a residential Growth Management Program Ordinance in April 1991. The Program was designed to regulate the rate of residential growth and to ensure ongoing availability of urban facilities and services.

"Managed Growth" remains a key component of planning in Turlock, yet it has evolved since the adoption of the Growth Management Ordinance in 1991. Growth Management Program was rescinded in 1997. Rather than placing an artificial "cap" on building permits, the City Council, through its annexation and area-wide planning policies adopted in 1998 and 1999 respectively, has required new development to be focused in specific areas and has established levels of service criteria, which

must be adhered to for an annexation to be approved. This two-pronged approach ensures that city services, public investment, and infrastructure can keep pace with development.

1.2 GENERAL PLAN REQUIREMENTS

California's tradition of allowing local authority over land use decisions means that the State's cities have considerable flexibility in preparing their General Plans. However, though land use policies are not mandated, the issues to be addressed in the Plan are prescribed by State law. California Government Code Sections 65300 *et seq.* establish requirements for the content of General Plans, as well as for their adoption and subsequent amendments.

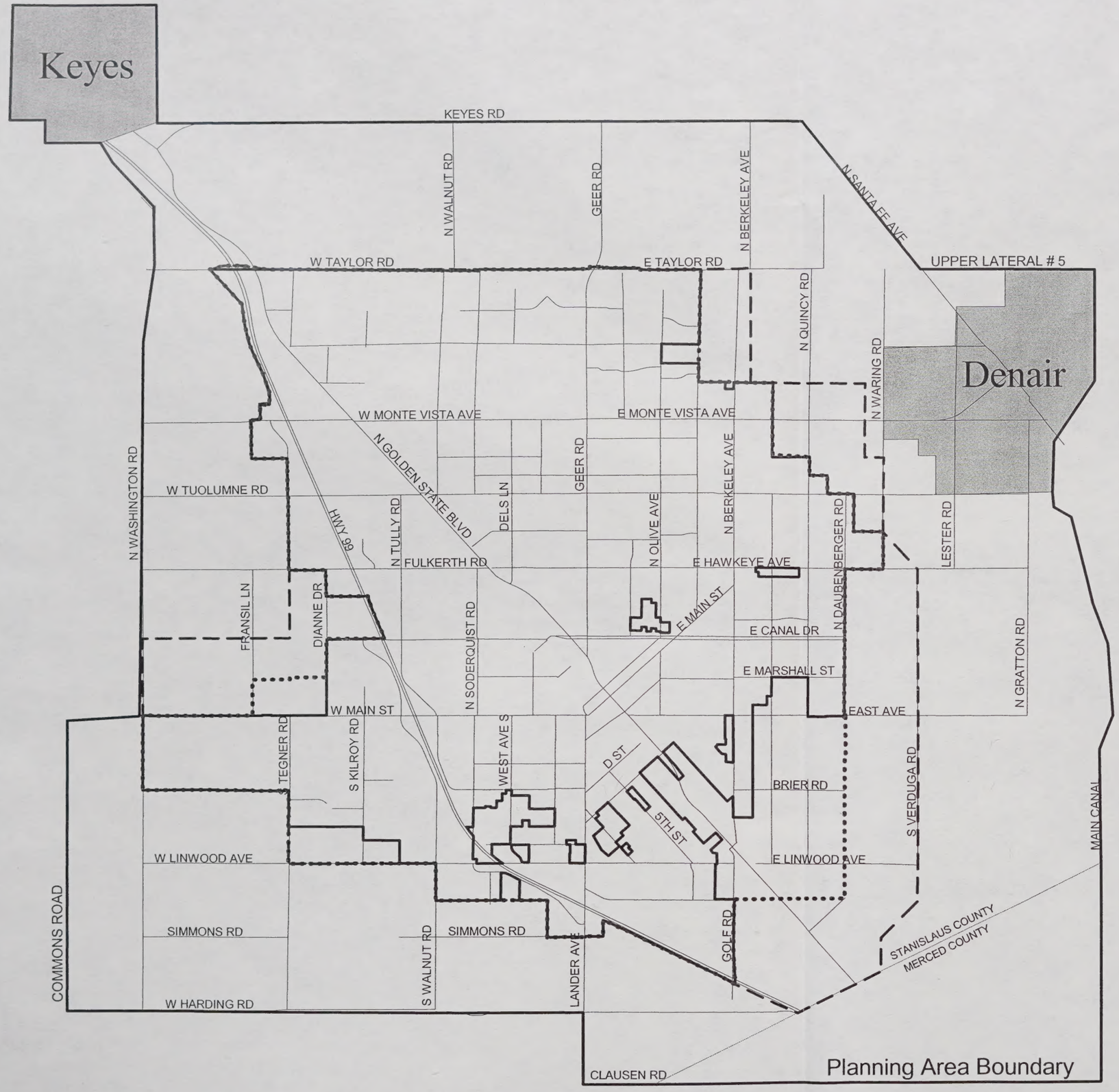
Seven general plan elements are required by State law, which permits the required contents of the elements to be combined at the discretion of the local government producing the Plan. The seven required elements are: Land Use, Circulation, Housing, Open Space, Conservation, Noise, and Safety. Section 1.5 describes how the material required to be included in these elements is organized and integrated with optional elements in the Turlock General Plan. The Housing Element is the part of the Plan for which the most detailed and extensive requirements are prescribed. Although often referenced as a separate document, the Housing Element is published in full and included in Section 3 of this document.

COMPREHENSIVENESS

The General Plan must be comprehensive. This requirement has two components. First is a geographic component, which requires that the Plan cover the entire incorporated area of the City, as well as any other land which bears relation to the City's planning. Figure 1-2 illustrates the Planning Area Study Boundaries, which extend beyond Turlock's city limits and ultimate Sphere of Influence. This larger geographical area has been included in the Plan's study area because the City believes these unincorporated communities and lands "bear relation" to planning activities the City undertakes. Second, the Plan must address the full range of issues associated with the City's physical development.

Planning Area & Boundaries

Figure 1-2



City Limits

Primary Sphere of Influence

Secondary Sphere of Influence

Plan Area

N

0 4000 8000 Feet

Turlock General Plan

City of Turlock, Planning Division
Updated January, 2002

INTERNAL CONSISTENCY

The consistency requirement established by State law (Government Code Section 65300.5) and interpreted in several significant judicial decisions requires the separate parts of the Plan to be fully integrated and to relate internally without conflict. This horizontal consistency requirement extends to the diagram and figures, as well as to text, and to data and analysis in addition to policies.

All portions of the Plan, whether required by the State or included at the option of local government, have equal legal weight. None may supersede another. Furthermore, if a single element of the General Plan is judged to be inadequate with respect to legal requirements, the entire Plan may be considered inadequate. Comprehensive General Plan revisions such as the one that resulted in production of this Plan provide an ideal opportunity to satisfy the requirements of both comprehensiveness and consistency.

AMENDMENTS TO THE PLAN

The Plan may be amended from time to time, but opportunities for such amendments are limited to four times per year. Each amendment may make an unlimited number of changes to the Plan. Because the requirement for internal consistency is never relaxed, particular care must be taken to ensure that amendments maintain consistency with text and diagrams in all Plan elements.

1.3 USES AND PURPOSES OF THE PLAN

The purposes of the City's General Plan are both abstract and concrete. The Plan document expresses the abstract ideas and visions of the community. The six themes described above together convey a sense of what is most important to the City's residents and how the community will focus its efforts in dealing with change during the coming decades. But the Plan will be in use long before the City's vision is achieved. The Plan is a document for landowners and developers to consult prior to formulating development proposals, and for City officials to consult when reviewing proposals for private development and public projects.

This Plan focuses on what is concrete and achievable; the inclusion of sections focusing on implementation and financing is evidence of this. As a guide to the City's physical development, the Plan offers criteria for evaluating the consistency and desirability of development proposals, and

it also sets forth actions to be undertaken by the City. These range from public works projects to revisions of the Zoning Ordinance. Because of the requirements that a variety of other City actions be consistent with the General Plan, regular ongoing use of the Plan is essential.

1.4 RELATIONSHIP TO OTHER CITY REGULATIONS, POLICIES AND PROGRAMS

The General Plan provides the basis for all of the City's regulations, policies and programs that relate to issues addressed in the Plan. In addition to requiring that the Plan be internally consistent, the State requires what is sometimes called vertical consistency — i.e., consistency between the General Plan and other City actions. This requirement means that the City's zoning and subdivision ordinances, specific plans and redevelopment plans must be consistent with the Plan. In addition, all development approvals, public works projects, and open space implementation programs have to be consistent with the General Plan.

The State's *General Plan Guidelines* provides the following rule for defining consistency: "An action, program, or project is consistent with the general plan if, considering all its aspects, it will further the objectives and policies of the general plan and not obstruct their attainment.[1]" This rule clarifies that consistency does not require all subsequent city actions to be specifically anticipated by the General Plan. Because the Plan is both general and long-range, there are many circumstances where future City actions will be addressed only generally in the Plan.

CONSISTENCY BETWEEN THE PLAN AND ZONING

The City's Zoning Ordinance is one of the most important tools for implementing the Plan. Requirements for consistency between the General Plan and zoning can be broken down into three aspects[2]:

- **Uses and Standards.** The General Plan's land use classifications are more general than the Zoning Ordinance classifications. For example, the Plan has four different categories for residential use, while the zoning ordinance is likely to have more. Multiple zoning

[1] *General Plan Guidelines*. Governor's Office of Planning and Research, Sacramento, CA, 1990, p. 212.

[2] *ibid.* p. 214.

districts may be consistent with a single General Plan residential classification, as long as all of the densities and unit types allowed in each zoning district are also permitted in the relevant General Plan category.

- **Spatial Correlation.** The Zoning Map should reflect the general pattern of land use depicted on the Plan Diagram. However the two need not be identical. Boundaries of land use classifications depicted on the General Plan Diagram are typically more precise in developed areas and more generalized in undeveloped properties; zoning boundaries may follow parcel or other lines. In instances where more than one zoning district corresponds with a single General Plan land use classification, boundaries for the districts will have to be created within the area of the corresponding use depicted on the Plan Diagram.

- **Timing.** There are two main issues related to timing. The first addresses the time frame for bringing zoning into compliance with the General Plan; State law allows a "reasonable time" for reconciling the zoning ordinance with the General Plan[3]. The General Plan has a 20-year horizon, while zoning focuses on the immediate appropriate uses for individual sites. In many cases, zoning will only gradually fulfill the prescriptions of the General Plan. The California Supreme Court has opined that "zoning is intended to represent a considered, specific and lasting implementation of the broad statements of policy of the general plan."[4]

  The second issue relates to the timing and sequencing of development. All land within City limits should be zoned in accordance with the General Plan land use designations. In instances where land outside the City is designated for non-agricultural uses on the General Plan Diagram, the designated General Plan uses can be applied for at the time of annexation using master planning, specific plans, and/or prezoning, as is currently the practice in Turlock. No land designated Agriculture in the Plan should be incorporated except where the City desires to maintain areas in agriculture that will serve as community separators. An array of zoning techniques such as overlay zones, enhanced amortization of non-conforming uses, etc., can be used to

[3] California Government Code 65860 (c).
[4] *United Outdoor Advertising v. Business, Transportation and Housing Agency* (1988) 44 Cal. 3d 242.

sequence and expedite implementation of the Plan. Performance standards can also be used.

Many General Plan policies, in particular those in the Land Use, Housing, and City Design elements, call for specific changes to be made to the Zoning Ordinance. Zoning Map and Ordinance changes based on both the General Plan Diagram and text are to be made by the City following Plan adoption.

1.5 USING THE PLAN / PLAN ORGANIZATION

The organization of the General Plan is summarized in Table 1.5-A. Throughout the Plan, cross-references guide the reader to related policies in other sections and elements. The Implementation Program unifies separate elements by identifying key actions for the City to undertake in the five years following Plan adoption.

The General Plan Diagram found at the back of this volume, illustrates policies relating to land use, circulation, conservation, and public facilities. The Diagram is an important part of the plan that contains information not presented anywhere else. However, General Plan policies cannot be interpreted from the Diagram alone. Policies throughout the Plan complement the information in the Diagram.

Each section of the Plan includes narrative text providing information about the topics addressed, followed by two sets of policies:

Guiding Policies are statements of philosophy or intent;

Implementing Policies are commitments to specific actions that are to be undertaken in order to achieve the results called for by the Guiding Policies.

TABLE 1.5-A
ORGANIZATION OF THE GENERAL PLAN

TURLOCK GENERAL PLAN ELEMENT	STATE-MANDATED?	MAJOR ISSUES ADDRESSED	CLOSELY RELATED ELEMENTS
Land Use	Yes	Distribution of land uses, standards for population density and building intensity, growth management, intergovernmental relations	All
Housing	Yes	Programs for production and conservation of housing for low and very-low income households and households with special needs	Land Use, City Design
Public Facilities	No	Parks, schools, non-transportation infrastructure	Land Use
Transportation	Yes	Street classifications, transit service, pedestrian and bicyclists needs, rail, truck routes	Land Use, Noise
Open Space and Conservation	Yes (combines two required elements)	Agriculture, air quality, water quality, energy	Land Use, Public Facilities (parks section)
City Design	No	City form, residential neighborhoods, Downtown	Land Use, Housing
Noise	Yes	Noise attenuation and reduction	Land Use, Transportation
Safety	Yes	Seismic safety, emergency preparedness, safety services	Land Use
Implementation[1]	No	Programs to be undertaken following Plan adoption	All
Financial	No	Plan implementation costs, municipal financing options, fiscal impact analysis.	All

[1] Not an adopted part of the General Plan.

Both types of policies are numbered individually for ease of reference. Many policy statements are followed by explanatory text or cross-references, which are in italic type. Text in a "script font" updates policies that have been accomplished as part of the 2002 General Plan Review. Numbered statements printed in roman type are the City's adopted General Plan policies. Text in italics is not adopted policy, but is included to provide additional descriptive information where appropriate. The General Plan Diagram, other figures, and the Land Use Classifications in Section 2.1 are also adopted parts of the General Plan.

1.6 PUBLIC PARTICIPATION IN PREPARING THE PLAN

Because the General Plan is intended to be a statement of community preferences, and because it will result in significant changes to the City, public participation in making the Plan is very important. Public input began even before the formal Plan revision process was initiated, with a public opinion survey conducted in summer of 1990. The results of the survey helped to identify key issues to be addressed as part of the General Plan revision process. Broad news coverage, including an op-editorial (along with an informational brochure) published prior to the first workshop, served to offer education to the City's citizens early in the Plan Update process.

During General Plan preparation, community participation was solicited at a number of well-attended workshops. Two of these focused on Plan issues, one on choices for the Plan, and one on land use alternatives. In each case written or graphic material was prepared in advance and made available to participants. A City mailing list was maintained and used to advertise the workshops. Other forums for public comment on the Plan have been City Planning Commission and City Council meetings at which staff has provided updates on the progress of the Plan.

Groups with special interests have also contributed. The City's Affordable Housing Task Force and the Turlock Community Housing Resources Board both provided information and ideas used in the Housing Element. The Arts Advisory Commission, the Community Activities and Facilities Commission, and the Turlock Chamber of Commerce submitted comments with suggestions for the Draft Plan.

The final stages of public participation were the hearings, at which the Environmental Impact Report that analyzes the Plan and the General Plan

was certified and adopted, respectively. Following a joint public workshop in early December 1992, the Planning Commission and City Council held thirteen public hearings during formal Plan Consideration process. Final adoption of the Updated General Plan took place on March 15, 1993.

In early spring of 1999, the City Council directed staff to initiate a review of the General Plan. The Planning Commission was appointed by the City Council to be the official body to oversee this process. Completion of the General Plan review was completed in 2002.

Section 2

Land Use Element

The Land Use Element consists of land use classifications, policies, and a land use plan, referred to as the General Plan Diagram, that designates the proposed general location and extent of each use category. The Element also includes policies to manage growth and inter-jurisdictional relationships. Issues related to city form, design, and character are addressed in the City Design Element.

The General Plan Diagram and the land use policies will have a major impact on Turlock's form and character over the life of the General Plan. Critical issues faced by Turlock that are addressed in this Element include: direction of urban expansion and phasing of growth, location of retail and neighborhood centers, revitalization of downtown, and location of proposed parks and recreational facilities.

The General Plan Diagram is often seen by many to be the "General Plan." It is only a graphic representation of the planning values and ideals of the community as expressed throughout the written text of this General Plan. The reader is reminded to refer to the Plan text in conjunction with the Plan Diagram.

2.1 LAND USE CLASSIFICATIONS

The following descriptions apply to land uses indicated on the General Plan Diagram (Figure 2-1). The legend on the Plan Diagram is an abbreviated version of the descriptions. The classifications are adopted as General Plan policy and are intentionally broad enough to avoid duplicating existing City or County zoning regulations. More than one zoning district may be consistent with a single General Plan land use category, and revisions to the zoning regulations will be necessary to implement the General Plan.

According to State law, the General Plan must establish standards of population density and building intensity for each land use classification. The General Plan stipulates residential densities in housing units per gross acre; population density can be obtained by applying average persons per

housing unit count[1] to the housing unit densities. The City's 1984 Plan stated densities as units per gross acre while the Stanislaus County's 1989 Plan expressed densities as units per net acre. For nonresidential uses, the Plan specifies a maximum permitted ratio of gross floor area to site area (Floor Area Ratio or FAR, see Glossary).

The density/intensity standards do not guarantee that development projects will be approved at the maximum density or intensity specified for each use. Zoning regulations, General Plan policies, and/or site conditions may reduce development potential within the ranges stated in the Plan. Table 2.1–A shows gross density standards for residential categories and FAR standards for the other uses. Assumed averages for residential categories are listed in the descriptions that follow. Mixed-use development in the new neighborhood centers may be approved at higher intensities; see Table 7.3–C in the City Design Element for details.

RESIDENTIAL

Residential densities are per gross acre of developable land, provided that at least one housing unit may be built on each existing legal parcel designated for residential use. State-Mandated second dwelling units and density bonuses for the provision of affordable housing are in addition to densities otherwise permitted. Small areas may have zoning at higher densities to reflect built intensities at the time of zoning ordinance revisions following Plan adoption.

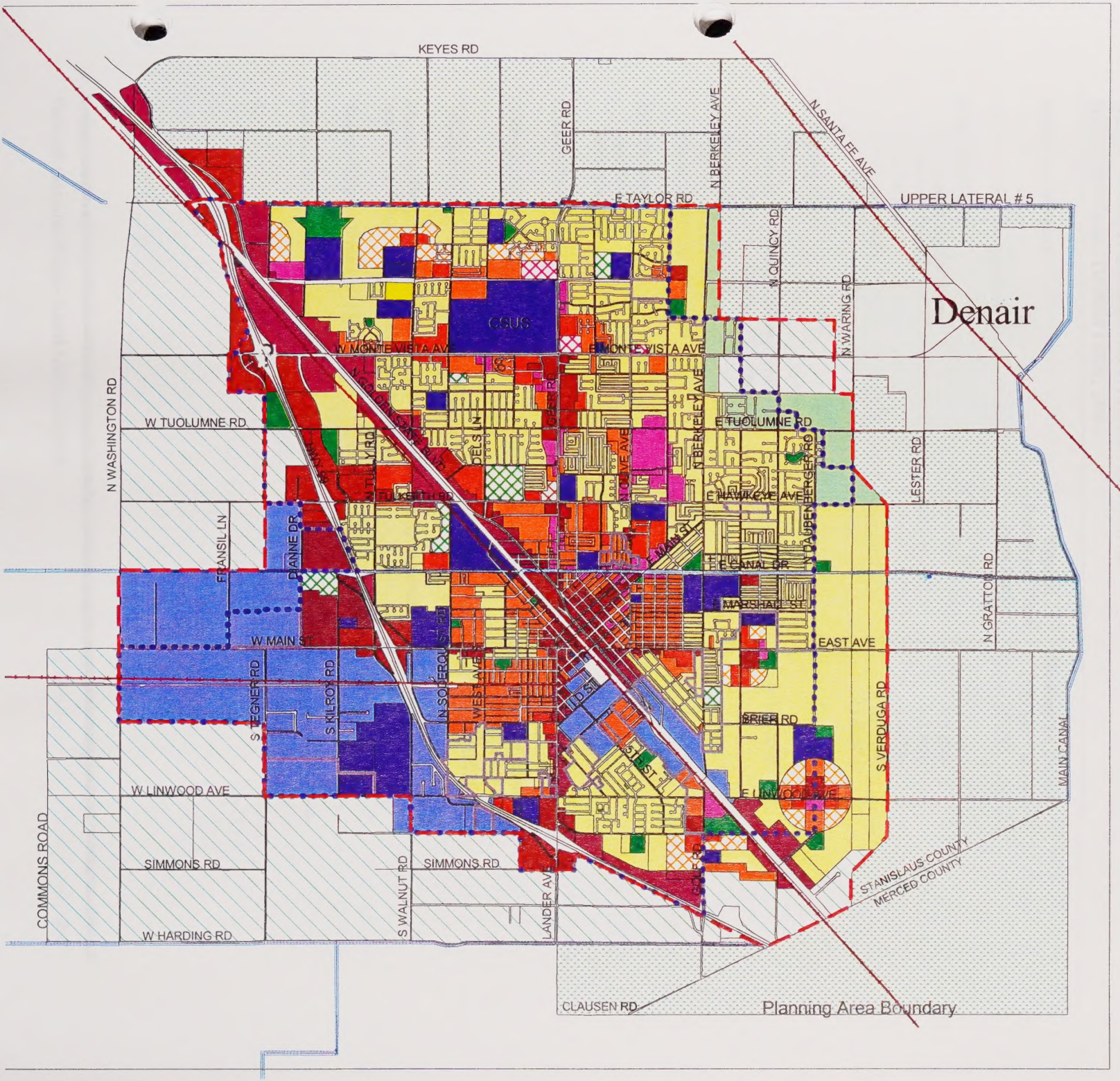
Residential areas can include childcare facilities, places of religious assembly, retail grocery stores not exceeding 2,500 square feet in size, and Residential Care Facilities consistent with applicable Federal and State Laws.

The average density per residential classification and estimated persons per unit are based on the City of Turlock Capital Facilities Fee Nexus Study, 2000. Assumed average densities and persons per unit are used to calculate probable housing unit and population holding capacity for the different residential classifications. Neither the averages nor the totals constitute General Plan policy. The different housing types referred to in the discussion below are illustrated in the City Design Element.

[1] Based on 2000 U.S. Census data, the number of persons per total housing units is 2.9.

Land Use Diagram

Figure 2-1



Very Low Density Residential (VLDR)
Low Density Residential (LDR)
Medium Density Residential (MDR)
High Density Residential (HDR)
Buisness Park (BP)
Commercial Office (O)
Heavy Commercial (HC)
Community Commercial (CC)
Industrial (I)
Agricultural (A)
Park (P)
Public / Semi-Public (PUB)
Detention Basin (DB)
Urban Reserve (UR)

MIXED USE DESIGNATIONS

Low & Medium Density Residential (LDR/MDR)
Medium Density Residential & Office (MDR/O)
Community Commercial & Office (CC/O)
Detention Basin & Park (DB/P)

City Limits
Primary Sphere of Influence
Secondary Sphere of Influence
Canal
Railroad

N

0 3000 6000 Feet

TABLE 2.1-A
ALLOWABLE BUILDING INTENSITIES AND RESIDENTIAL DENSITIES, 2001

Land Use Category	Typical Permitted Floor Area Ratio	Residential Density (units per gross acre)
RESIDENTIAL[1]	NA	
Residential Agriculture		0.5-2.0
Very Low Density		0.2-3.0
Low Density		3.0-7.0
Medium Density		7.0-15.0
High Density		15.0-30.0
COMMERCIAL		
Office	0.35	
Downtown Commercial/Residential	3.00	7.0-25.0
Community/Neighborhood Commercial	0.25	
Regional Commercial	0.35	
Highway Commercial	0.35	
Heavy/Service Commercial	0.35	
INDUSTRIAL		
Industrial	0.60	
Business Park	0.35	
AGRICULTURAL	NA	
URBAN RESERVE	NA	[subject to General Plan Amendment and master planning]

[1] Exclusive of second units and density bonuses for affordable housing.

Higher building intensities for mixed-use developments may be permitted in the new neighborhood centers; see Table 7.3-C in the City Design Element.

Source: Blayney Dyett Greenberg.

Residential Agriculture (RA). This designation provides opportunities for single-family residential and small scale-limited agricultural uses on lots typically ranging in size from 1/2 to 2 acres. Residential densities within this designation range from a minimum of 0.5 to a maximum of 2.0 dwelling units per acre. This designation is applied exclusively to the edges of areas planned for urban development where such edges have been defined as permanent and where the need for a buffer between residential development and agriculture has been identified. For this reason, housing in this classification is limited to single-family residential. Residential developments on properties designated RA will also be subject to special setback and development standards in conjunction with its role as a buffer.

Very Low Density (VLDR). 0.2 - 3.0 units per gross acre and three persons per unit resulting in a range of population density of 0.6 – 9.0 persons per gross acre. Typical lots will be one-third of an acre in size. This designation is proposed only for the northeast edge of Turlock and is to act as a residential, large lot buffer between the higher density, urban uses in Turlock and the lower density, rural uses in Denair; the intent is to maintain parcel sizes that can serve to keep both Turlock and Denair as separate, independent communities. The average density assumed for General Plan calculations is 2.0 units per gross acre.

Low Density (LDR). 3.0 - 7.0 units per gross acre and three persons per acre resulting in a range of population density of 9.0 – 21.0 persons per gross acre. Housing in this density range is typical of recent subdivisions built throughout Turlock, though few subdivisions have achieved densities at the high end of the range. The intent of this classification is to provide locations for construction of single-family homes with a range of lot sizes that allows large-lot subdivisions as well as detached housing on smaller lots that can reduce the cost of single family housing. The establishment of an RL4.5 zoning district as part of the new zoning ordinance adopted in January of 1997, allows for 4,500 square foot lots. Single-family detached residences will be the typical housing types in this range. To construct a large detached house (3,000 square feet plus) on the smallest achievable lot in this designation, a two-floor structure will be necessary. Because housing at this density reaches the largest residential market, it is expected to account for about half of all housing added in the Planning Area during the next twenty years.

Medium Density (MDR). 7.0 - 15.0 units per gross acre and 2.5 persons per acre, with an equivalent population density of 17.5 – 37.5 persons per gross acre. Virtually all new single-family attached residences are expected to be built in this density range, which recognizes that single-family attached and multifamily units will make up an increasing percentage of the City's housing stock in years to come. Single-family attached units offer a way to reduce the cost of owner-occupied housing. Housing of this type is consistent with the General Plan policies seeking to limit the expansion of the City in order to preserve agricultural lands and maintain a compact urban form, while responding to many households' preference for single-family units. Mobile home parks and apartments within this density range will meet the needs of many households without the financial means or the desire to be homeowners.

Single-family attached units will typically be built at 7 to 10 units per gross acre, though the range will permit mid-sized (1,500 square feet) houses in two-story row- or townhouses. Large units or State-mandated density bonus for affordable housing will necessitate multifamily housing types. This designation will also allow semi-detached houses and duplexes. At the upper-end of the range, apartments occupying about 85 percent of the area of a site will result in densities of 17.7 units per net acre. Most existing mobile-home parks at full occupancy are within the Medium Density range. Oak Park Apartments, located at 1700 North Tully Road, is at the high end of this density range. This complex contains 408 units and a density of 18.7 units per net acre.

High Density (HDR). 15.0 - 30.0 units per gross acre and 2.3 persons per acre, plus State-mandated bonus for affordability where applicable. The resulting range of population density will be 34.5 – 69 persons per gross acre. This classification is applied in a small number of locations where apartments would fit well with their surroundings. The findings of the Housing Element, which indicate the importance of multifamily housing in providing suitable homes for the City's low income households, are reflected in the application of this classification. A net-to-gross ratio of 0.85 will bring the net density to 35.3 units per acre, a density not yet achieved in Turlock. The State-mandated bonus could result in net densities as high as 44.1 units per acre at the top end of the range. The resulting housing type will to a great extent be determined by unit size, parking, and open space requirements but will include triplexes and quadruplexes, stacked townhouses, and walk-up garden apartments.

COMMERCIAL

The General Plan includes a number of commercial land use classifications, each with a separate purpose.

Office (O). The Office category includes business and professional offices, with a maximum FAR of 0.35. The areas near the Police Services/TID headquarters, Emanuel Hospital, and on Geer Road between West Canal Drive and Hawkeye Road are suitable for offices but not for retail businesses. The City's Professional Administrative Office District (P-A) in place in 1992 was modified in 1997 and is now known as the Commercial Office zoning district (C-O). The Commercial Office District allows for residences, but only in conjunction with mixed-use development. The Office District may include employee serving uses such as childcare and restaurants.

Downtown Commercial/Residential (DCR). This classification is applied to the traditional downtown area of Turlock and provides for a full range of retail and personal services uses, including apparel stores, restaurants, specialty shops, entertainment uses, bookstores, travel agencies, hotels/motels and other similar uses serving a community-wide market and a larger daytime employment population. It is also intended to accommodate banks, financial institutions, medical and professional offices, and other general offices and community institutional uses. Additional use limitations and special development standards, including separate parking requirements, are applicable to the downtown core area as identified in the Downtown Turlock Plan (generally centered on Main Street). Nonresidential development in this classification shall generally not exceed a FAR of 3.0. The DCR classification also applies to the older residential neighborhoods in the downtown area and provides for both single and multiple-family uses at densities ranging from 7.0 to 25.0 units per gross acre. Residential development either as a mixed use or as an independent use in the downtown area is encouraged.

Community/Neighborhood Commercial (CNC). This designation provides for a full range of retail and personal service uses, including retail stores, food and drug stores, apparel stores, specialty shops, home furnishings, durable goods, offices, restaurants and other similar uses that serve a neighborhood or community wide market. Scale, rather than use, distinguishes areas serving a neighborhood versus community wide market. Large scale commercial uses (large discount centers, big box retailers, etc.) serving a region wide market are specifically excluded from this designation. Development in this designation shall not exceed 0.25 FAR. In older areas, such as along Geer Road, parts of Golden State

Boulevard and Lander Avenue, many of these uses have been located along streets in "strip centers." In newly developing areas, these uses will be located in freestanding, integrated shopping centers.

Regional Commercial (RC). This designation provides for region-serving commercial uses, including large-scale shopping centers, discount "club" type stores, factory outlets, and other commercial uses such as retail stores, food and drug stores, apparel stores, specialty shops, motor vehicle sales, home furnishings, commercial entertainment facilities, hotels/motels and other similar uses that serve a region wide market. Development in this designation shall not exceed 0.35 FAR. The area generally between Fulkerth and Taylor Road included in the Northwest Specific Triangle has been classified for Regional Commercial uses. In the future, as development shifts from the north Turlock area to the south, the area east of State Route 99 south of Glenwood Avenue could also been an attractive site for region serving retailers. Development of the Glenwood Avenue area will require a Specific Plan similar to that prepared for the Northwest Triangle area before its development potential can be fully realized. Regional Commercial and/or large-scale region serving uses are not permitted on Geer Road and other areas classified for Community and Neighborhood Commercial development.

Highway Commercial (HC). This designation provides for uses designed to serve motorists traveling along State Route 99 at or near interchanges that are convenient and safe for such uses, and to a lesser extent along Golden State Boulevard (old highway 99). This designation is also intended to provide locations for uses that depend on high visibility from the freeway. Allowable uses in this designation include service stations, hotels/motels, restaurants, auto sales and other similar types of automobile-dependent uses. The maximum allowable FAR is 0.35.

Heavy/Service Commercial (HSC). This designation provides for heavy, wholesale and service commercial uses that do not need highly visible locations, or in locations where noise levels or other conditions may limit the suitability for other more retail-oriented uses. These uses can often serve as a buffer, transitioning between industrial activities or major transportation corridors and residential areas. Typical uses in this classification include repair facilities, distributing uses, sales of building materials, motor vehicle sales and service, contractor's yards and storage-oriented uses. The uses in this classification are often similar in character to industrial uses. Historically, many of these types of uses have been located along Golden State Boulevard. Development in this designation shall not exceed a FAR of 0.35.

INDUSTRIAL

Industrial (I). This designation provides for large and small scale industrial, manufacturing, distributing and heavy commercial uses such as food processing, fabricating, motor vehicle service and repair, truck yards and terminals, warehousing and storage uses, wholesale uses, construction supplies, building material facilities, offices, contractors yards and the like. Incidental retail and services may also be permitted provided they are primarily oriented to employees and businesses within the area. Development in the designation shall not exceed a FAR of 0.6.

Business Park (BP). This designation provides for office centers, research and development facilities, medical and professional offices, institutional uses, limited light industrial uses, warehousing and distributing, "back-office" uses, and other similar uses locating in a low intensity, landscaped setting with high design and development standards. Incidental retail and services may also be permitted provided they are primarily oriented to provide services to employees and businesses within the area. Development in this designation shall not exceed a FAR of 0.35.

PUBLIC / INSTITUTIONAL

Public/Institutional (PUB). This classification is applied to the city's major public and private institutional uses, including public safety facilities, public schools, California State University Stanislaus (CSUS), the State fairgrounds, and other prominent public uses and facilities. The Land Use Diagram shows the specific locations of existing major Public/Institutional facilities. Except for sites that have been acquired, the Land Use Diagram shows only the general location of future public or institutional uses in the area they will be needed. Selection of specific sites is the responsibility of the applicable governmental agencies and/or private institutions serving the Turlock area.

The designation on the Land Use Diagram of any future public or institutional site that has not been acquired shall not be construed to limit the existing or future use of the designated land. The predominant land use designation surrounding any property designated for public facilities shall be used to determine the potential use of the property prior to its acquisition by the applicable governmental agency or private institution.

PARKS (P).

This designation is applied to existing and planned public parks and open space, including specialized public recreational facilities such as Pedretti Park. Except for sites that have been acquired, the General Plan Land Use Diagram shows only the general location of future parks in the areas they will be needed.

The designation any future park site on the Land Use Diagram that has not been acquired shall not be construed to limit the existing or future use of the designated land. The predominant land use designation surrounding any property designated for a future park site shall be used to determine the potential use of the property prior to its acquisition by the City of Turlock.

Given their small size, some the mini-park sites may not be large enough to be displayed on the Land Use Diagram. This shall not prevent a site from being considered to have been appropriately classified.

AGRICULTURE (A)

Field and row crops, orchards, dairy operations and other agricultural activities are covered by this classification. Residential density is limited to a maximum of one unit per five gross acres (0.2 units per gross acre), provided that one housing unit may be built on each existing legal parcel. Agricultural activities are permitted in this classification with fewer restrictions on operations and animal maintenance than in residential classifications. However, agriculture-related commercial and industrial uses shall not occur in the Agricultural classification, rather on properties classified commercial and industrial. Table 2.1-B shows land area devoted to each land use classification in the plan diagram.

URBAN RESERVE (UR)

This classification is established for the purpose of identifying land which is reserved for future unspecified urban uses. Additional environmental analysis, a General Plan amendment, master planning, and annexation, if located outside the city, will be required before urban uses and/or development is permitted on land classified Urban Reserve. Agricultural uses are permitted on property classified Urban Reserve and shall be considered transitional; meaning that any agricultural uses eventually will be replaced by permanent urban development. Public facilities and recreation facilities may also be located on land classified Urban Reserve.

TABLE 2.1-B
ADDITIONAL DEVELOPMENT UNDER THE GENERAL PLAN BY LAND USE CLASSIFICATION[1] (in acres), 2001

	RESIDENTIAL				NON-RESIDENTIAL								
Turlock Quadrant	Very Low Density	Low Density	Medium Density	High Density	Office	Commercial[2]	Business Park	Industrial	Public Uses	Detention Basins	Parks	Urban Reserve	TOTAL
Northwest	0	422	73	36	38	379	57	64	0	2	102	0	1,173
Northeast	205	259	22	3	33	8	0	0	0	2	9	221	760
Southwest	0	123	8	5	0	56	46	1,064	0	0	24	0	1,330
Southeast	0	995	76	40	20	143	0	78	0	4	88	187	1,627
TOTAL	205	1,799	179	84	91	586	103	1,206	0	6	223	408	4,890

[1]This includes all developable land within the City limit, Primary and Secondary Spheres of Influence

[2]This includes all retail and heavy/service commercial uses

Sources: City of Turlock 2000 vacant land data

2.2 POPULATION HOLDING CAPACITY

At General Plan buildout, the City will accommodate 85,190 residents, almost doubling the 42,198 residents counted by the 1990 census. The time at which full development ("buildout") consistent with Plan policies will occur is not specified. Table 2.2- A shows additional development that may result under the General Plan, summarized by quadrants as depicted in Figure 2-2.

The addition of an Urban Reserve category will add 4,700 total acres to the General Plan Area. Areas appropriate for possible residential development could support 13,356 dwelling units, equating to an additional population of 38,700.[2]

Development consistent with the General Plan resulting from application of assumed average densities and building intensities for the different land use classifications to vacant and underutilized sites is described in Table 2.2–A. At the existing (2000 Census) ratio of 2.9 persons per housing unit, the Plan could result in an additional 10,130 housing units, or an additional population of 29,380 persons, for a buildout population of about 85,190 for Turlock (excluding Keyes and Denair).

The projected Turlock growth rate to 2010 of 3.38[3] percent is slightly less than that for the 1980s (4.8 percent) and the 1970s (6.5 percent). (See Table 2.2-B.) This is consistent with estimates based on StanCOG projections for the County which indicate a 2010 population of 619,800 (this represents an estimated 3.15 percent annual growth rate from 1990-2010), compared with a 3.4 percent rate of growth during the 1980s. The projected population for 2010 is estimated to be 77,900 and for 2012 an estimated 83,300. (See Table 2.2-C)

[2] Maintains 2.9.residents per dwelling unit.

[3] 1990 population, 42,224 and 2012 estimated projected population of 83,253

TABLE 2.2-A
ADDITIONAL DEVELOPMENT UNDER THE GENERAL PLAN IN HOUSING UNITS AND FLOOR AREA[1], 2001

	RESIDENTIAL (housing units)[2]					NON-RESIDENTIAL (floor area in thousands of sq. ft.)[3]			
Turlock Quadrant	Very Low Density Residential	Low Density Residential	Medium Density Residential	High Density Residential	TOTAL	Office	Commercial[4]	Business Park	Industrial
Northwest	0	1,690	510	540	2,740	580	4,130	870	1,670
Northeast	410	1,040	150	50	1,650	500	90	0	0
Southwest	0	490	60	80	630	0	610	700	27,810
Southeast	0	3,980	530	600	5,110	300	1,560	0	2,040
TOTAL[5]	410	7,200	1,250	1,270	10,130	1,380	6,390	1,570	31,520

BUILDOUT POPULATION

Increment population @ 2.9 persons per housing unit (2000 Census)	29,380
2000 Census	55,810
Total buildout population for Turlock (excluding Keyes and Denair)	85,190

[1]This includes all developable land within the City limit, Primary and Secondary Spheres of Influence

[2]VLDR is based on 2 units/acre, LDR is based on 4 units/acre, MDR is based on 7 units/acre, and HDR is based on 15 units/acre

[3]Office is based on .35 square feet of floor area/acre of land, Commercial is based on .25 square feet of floor area/acre of land, Business Park is based on .35 square feet of floor area/acre of land, and Industrial is based on .60 square feet of floor area/acre of land

[4]This includes all retail and heavy/service commercial uses

[5]All numbers rounded to the nearest ten.

Sources: 2000 Census, City of Turlock 2000 vacant land data

TABLE 2.2-B
POPULATION PROJECTIONS FOR TURLOCK AND STANISLAUS COUNTY, 2001

	1980		1990			2010		
	Population	% of County	Population	% of County	Annual Growth Rate 1980-1990	Projected Population	% of County	Annual Growth Rate 1990-2010
Turlock	26,287	9.9%	42,198	11.4%	4.8%	77,900	12.6%	3.38%
Stanislaus County	265,902	100.0%	370,522	100.0%	3.4%	619,800	100.0%	3.15%

Turlock and Stanislaus County figures from U.S. Census.
Turlock projected population based on StanCOG 2025 Land Use Projection, adopted 2000, and 2001 Department of Finance data.
County 2010 population estimated from StanCOG projections, amended 1998.

Sources: U.S. Census 1980 and 1990, Department of Finance 2001, Stanislaus Council of Governments, Stanislaus County Population Projections, 1998 and Land Use Projections, 2000.

TABLE 2.2-C
CITY OF TURLOCK POPULATION PROJECTION, 2001-2012[1]

Year	Population
1990[2]	42,198
2000[3]	55,810
2001[4]	57,756
2002	59,708
2003	61,726
2004	63,813
2005	65,970
2006	68,199
2007	70,504
2008	72,887
2009	75,351
2010	77,898
2011	80,531
2012	83,253

[1] Population projection is based on an annual growth rate of 3.38%
[2] 1990 Census
[3] 2000 Census
[4] 2001 California Department of Finance

2.3 RESIDENTIAL AREAS

Below are the land use policies related to residential areas. For detailed information on housing types and program policies, refer to the Housing Element, and for design policies, refer to the City Design Element.

Guiding Policies

2.3-a Provide for addition of all types of housing at a broad range of densities and prices.

2.3-b Facilitate multifamily housing construction and permit it in all sectors of the Planning Area.

2.3-c Encourage small-lot single-family housing construction.

This policy has been implemented by adoption of the new zoning ordinance, January 14, 1997, TMC §9-3-202 and 9-3-203, which implemented the R-L 4.5 zoning district. This district has a minimum lot size of 4,500 square feet and a density of 5-10 units/acre .

2.3-d Encourage new residential areas to have a "neighborhood" orientation.

See also City Design Element.

2.3-e Preserve the scale and character of existing neighborhoods.

2.3-f Maintain diversity in the citywide mix of housing types.

Implementing Policies

2.3-g Revise zoning ordinance and/or adopt residential design guidelines that establish development standards consistent with the objectives and classifications in the General Plan. These would include:

- Establishing minimum and maximum densities consistent with the Plan.

  Minimum and maximum densities have been implemented as part of the adoption of the new zoning ordinance, January

14, 1997, TMC §9-3-202 and 9-3-203, Residential Districts.

- Reserving the Planned Development (P-D) designation for projects that offer design possibilities that would be constrained by adoption of standard residential or other base district zoning.

  To prevent imposition of the P-D process on unwilling applicants, the zoning ordinance should limit the P-D process so that it is initiated only at the request of project proponents.

- Establishing a 4,500 square-foot minimum lot zone to allow small-lot single-family development as-of-right in the Single Family (R-1) zone district.

  Small-lot housing is likely to encourage participation in the ownership market by many first-time buyers. Small-lot development will result in conservation of land and allow the City to retain some residents who might otherwise go elsewhere to purchase a house. The 4,500 square-foot lot zone could either be a part of the R-1 district or a separate zone by itself.

  The establishment of an R-L4.5 zoning district, as part of the new zoning ordinance adopted in January of 1997, allows for 4,500 square foot lots (TMC §9-3-201.b).

2.3-h Prepare and adopt residential design guidelines (see also City Design Element).

Guidelines allow community agreement on design expectations before projects are proposed. They can be structured so as not to stifle creativity while allowing fulfillment of community objectives. Residential design guidelines will be applicable to all projects except custom single-family homes on infill sites. Some of the current policies, such as subdivision development standards, will require reexamination.

Design Guidelines were adopted in conjunction with the Zoning Ordinance to compliment the mandatory property development regulations included therein.

2.3-i Development of lands east of Daubenberger, south of Hawkeye, designated for Low Density Residential is considered premature for annexation and development until adequate recreational and park facilities for the South East Quadrant of the City have been identified through an adopted Parks Master Plan.

During adoption of the Updated General Plan the City Council eliminated a proposed 35-acre community park site identified in the vicinity of Daubenberger Road and Canal Drive based on community concerns. It was acknowledged that community and neighborhood parks are an important community asset and that sites must be identified prior to development.

The Parks Master Plan was adopted in July 1995.

2.4 RETAILING AND RELATED USES

Retail areas offer convenience to Turlock residents and help shape the City's image. About 16 percent of Turlock's residents (1990 Census) are employed in the retail-trade sector. (See Table 2.5–A for more information on employment by industry.) Shopping and use of services are activities that provide for social contact as well as business transactions. Though residents may not know neighborhoods outside their own, community shopping areas are likely to be equally well known by people living in all areas of the City. Therefore, retail districts are a critical element of people's perception of their city.

Retail and related uses within the City are important ingredients in the City's success from an identity and a fiscal viewpoint—one percent of total taxable sales, $4.71 million in 1997 and $5.17 million in 1998, goes into the City's General Fund. Of course, such businesses also provide jobs in the community.

As shown in Table 2.4–A, per capita sales in Turlock in 1990 and 1997 were slightly higher than the average per capita sales for Stanislaus County as a whole. In many categories, including food stores, auto dealers and auto suppliers, and service stations saw a large increase, from 1990-1997, where per capita sales are higher in Turlock than in Modesto. This is probably attributable to the fact that many residents of smaller communities (Patterson, Newman, Delhi, and Hughson, as well as Keyes and Denair) come to Turlock to make purchases. However, there are several categories where Turlock sales are weak relative to Modesto,

reflecting poor merchandise selection in Turlock. These categories are apparel, general merchandise, home furnishings and appliances, and other retail stores—types of merchandise for which shoppers like to have a wide selection. Leakage of sales in these categories has been documented by market studies prepared for recent retail development proposals. Plan policies support the addition of retail facilities that will provide more choice in these categories.

However, the strong increase in "General Merchandise" is related to the opening of Wal-Mart (May, 1993) and other smaller retail stores locating in the community. Also, during this time period, an auto dealer relocated out of City limits; however, an Auto Mall was established along the Highway 99 corridor and Fulkerth Road, helping to stabilize the "Auto Dealers and Auto Suppliers" per capita sales figure. In 2000, the Monte Vista Crossings Shopping Center opened with Home Depot and Target as the main anchors.

The Plan envisions a considerably expanded retail sector in the City—with expansion greater than the anticipated growth in City population. The anticipated doubling of the 55,000 Planning Area population over the next twenty years, along with increased per capita sales resulting from the addition of regional retail, suggests that the Planning Area could support as much as 1.8 million square feet of additional retail floor area.

The following policies relate to the land use aspects of retail and related uses. For urban design policies relating to Downtown and neighborhood design, refer to the City Design Element.

TABLE 2.4-A
PER CAPITA TAXABLE RETAIL SALES, 1990 and 1997
TURLOCK, MODESTO, STANISLAUS COUNTY, AND CALIFORNIA

	Turlock		Modesto		Stanislaus County		California	
Type of Business	**1990**[1] (pop. 42,198)	**1997**[2] (pop. 50,100)	**1990**[1] (pop. 164, 730)	**1997**[2] (pop. 180,800)	**1990**[1] (pop. 370,522)	**1997**[3] (pop. 425,400)	**1990**[1] (pop. 29,760,021)	**1997**[3] (pop. 32,957,000)
Apparel	$208	$125	$438	$401	$240	$194	$343	$350
General Merchandise	790	1557	1855	2141	980	1151	867	953
Drug Stores (taxable)	359	NA[4]	253	NA	218	169	159	156
Food Stores (taxable)	757	759	586	537	520	493	498	483
Eating and Drinking Places	770	845	820	884	618	650	777	857
Home Furnishings & Appliances	373	228	668	473	389	269	316	292
Building Materials & Farm Implements	551	514	723	708	719	525	547	475
Auto Dealers and Auto Suppliers	1289	1233	1087	863	1160	1135	1060	1154
Service Stations	569	840	484	473	481	497	499	586
Other Retail Stores	612	918	996	1308	813	523	943	206
Packaged Liquor Stores	81	NA[5]	122	NA[5]	92	76	68	54
TOTAL	**$6,359**	**$7,026**	**$8,032**	**$7,788**	**$6,230**	**$5,682**	**$6,077**	**$5,566**
Percent of California Per capita sales	105	126	132	140	103	102	100	100

Sources: 1990 U.S. Census, California State Board of Equalization and Department of Finance

[1] Based on 1990 Census Population
[2] January 1, 1997 Department of Finance population projections for communities.
[3] July 1, 1997 Department of Finance population projections for counties and the state.
[4] Drug Stores included within the category General merchandise for Community-Based statistics.
[5] Packaged Liquor Stores included within the category Other Retail Stores for Community-Based statistics.

Guiding Policies

2.4-a Encourage regional retail shopping in the City along the highway 99 corridor.

The City's established shopping centers offer a selection of major supermarkets and drug stores, while Downtown and smaller shopping center tenants offer specialty shops and services. What the City does not have are full-size major department stores. Economic data, resident surveys, and Turlock's current weakness in apparel and general merchandise sales indicate a good market for a regional commercial centers.

The Northwest Triangle Specific Plan, adopted on October 1995, allows for regional commercial opportunities along the Highway 99 corridor in the Northwest area of Turlock. An additional opportunity for a regional commercial center may exist in the Highway 99 Lander/Glennwood Area.

2.4-b Provide adequate lands to accommodate the development of commercial areas, which will: (a) conveniently serve current and future residential needs, (b) provide employment opportunities, (c) contribute to the attractiveness of the community, and (d) contribute to the City's tax base.

2.4-c Designate areas for commercial and industrial uses only to the extent that adequate support (service land uses, etc.), convenient access to employment, and compatibility with adjacent land use designations can be assured.

2.4-d Limit additional "neighborhood/community commercial" and "strip commercial" centers along Geer Road by restricting changes in zone districts from residential or office to retail commercial.

Extensive public input during the General Plan process emphasized the desire to avoid creation of lengthy commercial strips. Further, existing traffic volumes and lack of available right-of-way for road widenings limit the ability of Geer Road to accommodate the higher traffic volumes that would be associated with more retail activity.

2.4-e Make Downtown a unique shopping district emphasizing specialty shops, entertainment opportunities, restaurants, and professional services.

See Section 7.2 for discussion and policies on Downtown.

2.4-f Emphasize compact form and pedestrian orientation in new community and neighborhood shopping areas.

Participants at community meetings on the General Plan expressed dislike for arterial streets with strip-form shopping districts that must be navigated by car. The General Plan emphasizes shopping districts with a neighborhood outlook except for regional serving shopping centers that, due to their products and locations, are orientated towards the automobile.

2.4-g Contribute to neighborhood identity by providing for local shopping centers that many residents can reach by foot or bicycle.

Local-serving shopping centers are key elements of the neighborhoods described in Section 7.3.

Implementing Policies

2.4-h Provide opportunities for regional commercial centers with other regional retailers (such as auto dealers) nearby.

The General Plan allocates about half of the retail space to be added in the City to regional commercial centers, a new auto mall, and the Wal-Mart site. All are in the triangle bounded by Highway 99, Fulkerth, and Golden State Boulevard. This area should be sufficient to accommodate 1.6 million square feet of retail space.

The Northwest Triangle Specific Plan was adopted in October 1995. The Auto Mall, located at Highway 99 and Fulkerth, opened with its first dealer in November 1997. Wal-Mart was open for business in 1993. The Monte Vista Crossings Shopping Center opened in 2000.

2.4-i Require regional commercial center developers to fund transportation improvements that will be necessary to accommodate the level of activity anticipated.

Because of the proximity of regional commercial centers to the Monte Vista / Highway 99 interchange, improvements will be required to serve regional commercial center traffic. Developer funding should be made a condition of project approval.

The North West Triangle Specific Plan area fee was adopted in March 1999. The fee is collected to pay for additional sewer, storm drainage, and transportation facilities required to serve that development. The development fees to be collected for each land use are calculated based upon the proportionate share of the total facility use that each land use represents. The full Monte Vista/Highway 99 interchange improvements were completed in 2000.

2.4-j Promote development of neighborhood-oriented mixed-use centers that provide convenience shopping.

Ease of access, visual prominence, and limited neighborhood shopping are reasons for both the success of retail on Geer Road and the traffic congestion problems there. Continuing the present pattern would mean an increase in traffic on an already-overburdened street and greater distances between shopping areas.

2.4-k Distribute shopping areas so that new neighborhood centers will be located just over one mile from existing major (80,000 square feet or more) shopping centers.

This policy will improve access to neighborhood centers and avoid proposals for more shopping centers than can be supported. A rule of thumb is that at least 10,000 trade area residents are needed to support a supermarket that must compete with large existing stores. In each trade area only one is likely to succeed, and duplication will cause vacancy, substandard development, or attempts to locate inappropriate uses on sites that are unable to attract a supermarket.

2.4-l Allow neighborhood grocery stores not exceeding 2,500 square feet in areas wherever they can be supported and will not create unacceptable traffic problems or nuisance due to hours of operation.

The General Plan Diagram does not recognize all existing neighborhood groceries or indicate sites at all locations suitable for additional stores.

The Zoning Ordinance was amended in 1997 to allow for neighborhood stores in residential districts upon approval of a Minor Discretionary Permit, TMC §9-3-202.

2.4-m Amend the City's Zoning Ordinance to distinguish among types of retail areas by creating a Thoroughfare Commercial Zoning District and differentiating between regional retail (e.g., mall and auto dealer sites) and local-serving retail.

The Zoning Ordinance should convey the City's intent to separate retail uses with different functions. The proposed modified land use designations helps clarify the commercial designations. The Zoning Ordinance should be amended to provide corresponding zoning designations.

2.4-n Do not approve commercial development projects without a satisfactory traffic and/or parking impact mitigation program. No occupancy permits should be issued until associated traffic and parking impact mitigation measures are completed or established.

2.4-o Implement Downtown Master Plan.

See Section 7.2 for discussion of the Downtown.

2.4-p The Land Use Designations within the Northwest Triangle (bordered by Hwy. 99, Fulkerth Road, and Golden State Blvd.) may be refined and modified following adoption of a Specific Plan prepared pursuant to C.G.C. 65450 et seq.

The land uses designated in the "northwest triangle" add considerable amount of lands designated for community commercial land uses while acknowledging significant circulation constraints. The City encourages these property owners to participate in preparation of a Specific Plan as an implementing tool of this General Plan.

The Northwest Triangle Specific Plan was adopted in October 1995.

2.5 INDUSTRY

Turlock's agricultural setting has historically provided a basis for the City's industry. Food processing is the industry, employing the most people in the City.

Tables 2.5–A and 2.5–B summarize information about Turlock industry in 2001. Notable is the predominance of manufacturing businesses, and, among the largest employers, the importance of food processing and food-related manufacturing. This pattern is representative of the County as a whole—according to the State Employment Development Department, 25 percent of non-agricultural jobs in Stanislaus County in 2000 were in "goods-producing industries." About 57 percent of manufacturing jobs are directly related to food products in Stanislaus County in 2000.

TABLE 2.5-A
TURLOCK INDUSTRY, 2001

Number Of Employees	NUMBER OF BUSINESSES					
	Manufacturing	Wholesale	Processor	Distribution	Other	TOTAL
1-10	20	10	6	9	5	50
11-25	7	5	2	3	6	23
26-50	11	2	3	3	1	20
51-100	7	0	3	2	1	13
101-250	4	0	1	2	0	7
251-500	0	0	1	0	0	1
>500	0	0	2	0	0	2
TOTAL	**49**	**17**	**18**	**19**	**13**	**116**

Sources: Turlock Chamber of Commerce, Turlock Industrial Directory, 2001

TABLE 2.5-B
PROFILE OF INDUSTRIES EMPLOYING OVER 100 PERSONS, 2001

Company Name	Industry Type	Area of Distribution	Corporate Headquarters	Number of Employees
Butterball Turkey*	Processor	International	Out of state	Over 500
Foster Turkey Products*	Processor	National	California	Over 500
Valley Fresh, Inc.*	Processing	International	Out of state	251-500
Associated Feed & Supply*	Manufacturing	California	California	101-250
GL Precision	Manufacturing	Western U.S.	Turlock	101-250
Gemperle Enterprises*	Processor	International	Turlock	101-250
International Paper*	Manufacturing	International	Turlock	101-250
Mid Valley Dairy*	Processor	California	California	101-250
Tab Products	Manufacturing	International	Turlock	101-250
Varco-Prudent Building	Manufacturing	Western U.S.	Out of state	101-250

*food-related industry

Source: Turlock Chamber of Commerce, Turlock Industrial Directory, 2001

Features that make the City an attractive industrial location include:

- **Regional Location.** Proximity to Central Valley cities and the Bay Area make Turlock an excellent location from which to distribute goods.

- **Good transportation links.** Freeway and rail access (Santa Fe, and Union Pacific) are available.

- **Housing Cost.** According to the Board of Realtors Turlock Home Sales Report for 2001 (through August), the median price of a home was $153,300. A mortgage on a $153,300 home (5% down, 7% interest, 30-year fixed) equates to monthly payments of $1,140 (PITI). The following incomes are necessary to sustain a mortgage for the 2001 median priced home: $41,110 annually, $3,430 monthly or $19.75 hourly. A growing population has meant a large labor pool, but increased housing costs tend to drive up wages and therefore production costs.

- **Presence of a four-year college.** CSUS offers continuing education for professionals as well as opportunities for undergraduate and advanced degrees.

- **Utilities.** Electricity has been available from TID at rates lower than are offered by PG&E. In 2000, the wastewater treatment facility currently is designed for 20 Million Gallons per Day (MGD), while treating an average of 11.9 MGD. (See Section 4.3 for policies on wastewater capacity).

Guiding Policies

2.5-a Minimize conflicts between industry and other land uses by concentrating industrial activity west of Highway 99.

Though some industry, including major poultry processing operations, is located east of the freeway, future industrial growth will be directed to the west where land use conflicts will be minimized.

2.5-b Enhance the positive factors that have made the City attractive to industry.

There are a number of factors that make Turlock attractive to industry: a central location (located in central California and adjacent to Highway 99); lower energy rates (provided by Turlock Irrigation District (TID) and among the lowest in the nation); educated work force (California State University, Stanislaus is located in Turlock); affordable housing; and, an optimal quality of life. The overall quality of life in the community is one that citizens appreciate and enjoy.

The City of Turlock and the Chamber of Commerce continue to collaborate in an on-going effort to develop educational materials and resources to make "doing business with the City" a positive experience.

Some of the factors that affect industrial location are not within the control of the City; for example, the *long-term availability of water. The City's investigation of alternative water sources including well-head treatment may result in a solution to this problem before it becomes a constraint on future development. Plan policies in section 6.2 address these issues.*

2.5-c Preserve the existing inventory of land designated for industrial use by restricting its conversion to non-industrial uses other than those necessary to serve tenants of industrial areas.

Turlock is fortunate because its largest industrial area is separated from housing and neighborhood-serving activities. Preserving this separation is one way to minimize land use conflicts and to make the City attractive to new and expanding industries.

2.5-d Maximize the supply of land that is designated by the General Plan, annexed and zoned for industrial use.

During the first quarter of 1999, local real estate reports indicated that less than one percent of rentable industrial space was vacant. Other cities in the area are experiencing similar low vacancies.

In locating new industrial operations, businesses generally seek sites with needed characteristics where the cost of development approvals and construction—measured in both time and dollars—can be minimized. Understandably, sponsors of industrial projects also try to reduce the amount of risk when starting up a new operation. Both cost and perceived risk appear to be deterrents to businesses seeking to locate or expand in Turlock. Representatives of the City's Chamber of Commerce, the Stanislaus County Economic Development Corporation (SCEDCO) and local realtors have identified the insufficient supply of industrial land that is annexed to the City and provided with basic services as one such problem.

Implementing Policies

2.5-e Seek LAFCO approval of a Sphere of Influence change that would include all industrial land designated on the General Plan Diagram.

The Sphere of Influence was modified by LAFCO, including all industrial land designated on the General Plan Diagram, on August 25, 1993, Stanislaus County Local Agency Formation Commission Resolution No. 93-12. Future addition of industrial land into the Urban Reserve areas would require compliance with the Urban Reserve policies (Section 2.10) by the City of Turlock prior to an amendment Sphere of Influence by LAFCO.

2.5-f Maintain an adequate supply of industrial land within the incorporated city limits.

2.5-g Designate appropriate truck routes and "industrial streets" in order to accommodate industrial traffic and avoid unanticipated conflicts.

See Policy 5.2-q.

2.5-h Design industrial development to minimize potential community impacts adversely affecting residential and commercial areas in relation to local and regional air quality and odor, adequacy of municipal service, local traffic conditions, visual quality, and noise levels.

2.5-i Buffer industrial and heavy commercial areas from adjacent residential, commercial, and recreation areas.

2.5-j Designate industrial areas to be solely utilized by industrial uses to maintain and encourage mutually supportive, attractive, and compact industrial environments and to be protected from encroachment or preemption by other incompatible uses.

2.6 PROFESSIONAL OFFICES AND BUSINESS PARK

In the early 1990s, office employment is provided by jobs in government (City of Turlock and Turlock Irrigation District), education (Turlock school districts and CSUS), and the health care industry (Medic Alert and Emanuel Medical Center). The City's largest concentrations of office space are in the area of the Police Services Building on Palm, City Hall on South Broadway, around Emanuel Medical Center and Downtown. Offices are also found along the southern part of Geer Road, mixed with retail businesses and single- and multifamily housing. Professional offices are clustered near the Emanuel Medical Center, and at several scattered sites. As the City grows, it is likely that the space needed for both government services and health-care related services would increase.

While office employment has not historically been a major contributor to the City's economy, there are good reasons to implement strategies to increase office activities. Growth in trade, manufacturing and service

sectors, projected to account for the largest increase in employment over the next 20 years, is likely to spur office development. Office employment does not create heavy demands on the City's water supply and wastewater treatment facilities, or directly generate air emissions. Further, expansion of office activities such as those in the finance, insurance and real estate (FIRE) category would diversify the City's economic base and offer more varied employment opportunities for Turlock area residents.

Guiding Policies

2.6-a Contribute to diversifying the City's employment base by designating large sites for office/business park use.

Choices of location have been limited for businesses needing large sites but not wanting to be surrounded by industrial activity.

Advances in communication services have greatly reduced the need for information processing businesses to locate in the center of metropolitan areas. Turlock can offer relatively low costs, low employee turnover, and high visibility sites for this or other categories of employers.

2.6-b Encourage local-serving offices to locate in and near Downtown.

A Downtown location will provide strong identity to local businesses, as well as offer convenience to customers and lend support to Downtown restaurants, shops and services.

Implementing Policies

2.6-c Designate approximately 1,300 acres for a "high-standard" office/industrial business park west of Highway 99.

Specific uses need not be identified, and might range from office to industrial activities that produce little noise or waste and that fit in with quality surroundings. Whatever the use, a high standard of design and landscaping will be required.

An industrial business park was designated in the 1992 General Plan. The revised land use diagram and zoning ordinance was adopted in 1997.

2.6-d Continue concentration of medical offices in vicinity of Emanuel Hospital.

2.6-e Use offices to form links north and south of the Police Services Building to Geer Road retail and ~~to~~ Downtown.

2.6-f Revise the professional/administrative (P/A) zoning district so that professional and administrative offices are a permitted use, and housing is a conditional use.

The zoning regulations in effect as of 1992 make offices a conditional use in the P/A district and permit single-family and two-family dwellings as-of-right.

The 1997 Zoning Ordinance Update, adopted in 1997, revised the P/A zoning district to C-O (commercial office), allowing offices as a by-right use.

2.7 GROWTH MANAGEMENT

Turlock's rapid growth in the late 1980s led to concerns about adequacy of public facilities and impacts of expansion on agriculture, which in turn led to adoption of the Growth Management Program (GMP). Residential building permits issued jumped from 197 in 1985 to a high of 1,033 in 1987, then down to 897 in 1988 and 481 in 1989. Due to the recession, demand for building permits in the early 1990s has been less than the maximum stipulated by the Program. However, provisions regarding facility adequacy and project size continue to be relevant. The GMP was rescinded by City Ordinance 914-CS on January 14, 1997 as part of the Zoning Ordinance Update.

In 1998, the City of Turlock adopted a Residential Annexation Policy that focuses annexations and growth to one quadrant of the city at one time (City Council Resolution No 98-036). There are four quadrants and new residential development was designated to occur first in the Northwest Quadrant (Figure 2-2). Focusing development in one area at a time allows for timely and efficient use of infrastructure and resources. Furthermore, in 1999, the City adopted a policy that requires area-wide planning in conjunction with future annexations (City Council Resolution No 99-021). Area-wide plans must address land use, circulation, housing, open space,

infrastructure, public facilities and public services consistent with the General Plan. Both of these policies serve to ensure that growth is orderly.

Guiding Policies

2.7 a Continue to promote orderly expansion of the City's boundaries through prezoning territory prior to annexation.

This policy reinforces other policies relating to city design and agricultural preservation.

2.7 b Ensure the adequacy and quality of public services and facilities for all residents.

2.7 c Modify growth policies as needed in response to changing development economics and changing city priorities.

Changes in state law have prompted the City to focus growth into certain areas to allow for the orderly and cost effective provision of infrastructure. Growth issues are also addressed by the Area-Wide Planning Policy.

2.7 d Keep growth in pace with city services.

2.7 e Ensure a balance of housing types affordable to very-low-, low-, and moderate-income households.

See also Housing Element.

Implementing Policies

2.7 f Integrate Housing Element program components with growth policies.

2.7 g Continue to annually review the City's Capital Improvement Program in order to increase capacity of needed public services in response to City growth.

2.7 h Proposals for prezoning and annexation shall comply with the Residential Annexation Policy, Area-Wide Planning Policy, and the municipal code requirements relating to orderly and contiguous development, and public services and facilities.

Planning Area Quadrants

Figure 2-2

N

0 4000 8000 Feet

Turlock General Plan

City of Turlock, Planning Division
Updated January, 2002

The prezoning and annexation ordinance (TMC §9-5-704) includes nine questions addressing contiguity and public service impacts that must be answered in the affirmative in order for an application to be accepted for consideration. The Quadrant Policy (City Council Resolution No 98-036) focuses annexations and growth to one area at a time allows for timely and efficient use of infrastructure and resources. The Quadrant Policy and Area-Wide Planning Policy require prezoning and annexation projects to address issues regarding orderly growth, infrastructure and public service impacts in order for the project to be approved.

2.8 THE PLANNING AREA AND CITY/COUNTY RELATIONSHIPS

The Planning Area is the geographic area for which the General Plan establishes policies about future urban growth, long-term agricultural activity, and natural resource conservation. The boundary of the Planning Area, which encompasses approximately 40 square miles, was determined by the City Council in response to State law requiring each city to include in its General Plan all territory within the boundaries of the incorporated area as well as "any land outside its boundaries which in the planning agency's judgement bears relation to its planning" (California Government Code Section 65300).

The Planning Area is the territory for which the City makes policy in the General Plan, but it is not a future City boundary or a future urban area. Inclusion of unincorporated land in the Planning Area does not mean that the City disagrees with County policies—in many cases the intent of the General Plan is to support or express agreement with County policies for surrounding areas. The Planning Area includes all of the City's Sphere of Influence, but is different from it. The Sphere of Influence is a boundary that encompasses lands that are expected to ultimately be annexed by the City. By contrast, portions of the Planning Area beyond the Sphere of Influence will never be annexed to Turlock. Another difference is that while the City determines its Planning Area without formal consultation with other agencies, decisions about Sphere of Influence and City boundaries must be made by the Local Agency Formation Commission (LAFCO) of Stanislaus County.

Additional policies relating to City/County relationships are addressed in Section 6.1, Agriculture, and Section 10, Implementation Program.

Guiding Policies

2.8-a Support Stanislaus and Merced County policies that promote continued agricultural activity on lands surrounding the urban areas designated on the General Plan Diagram.

Implementation of the General Plan will expand the City's urbanized area by eight square miles, but most of the Planning Area is to remain in agricultural use.

2.8-b Work with Stanislaus County to direct growth to incorporated areas and established unincorporated communities.

A key policy of the General Plan is the limited and orderly expansion of the City. This policy would be undermined by approval of urban activities in unincorporated areas.

2.8-c Defer to Stanislaus County for land use planning for the unincorporated communities of Keyes and Denair, provided County policies are consistent with the City's ability to provide sewage treatment and the desire to remain physically separate from surrounding communities.

Two exhibits (Figure 2-4 and 2-5) reflect Stanislaus County's General Plan land use designations for Keyes and Denair. Denair's updated land use map was approved in December 1998 and Keyes Community Plan Update was approved in April of 2000. Since Turlock provides sewage treatment service to Keyes and Denair, the City's primary interest is in making sure that plans for those communities reflect reasonable expectations regarding the availability of treatment capacity.

2.8-d Relieve pressures to convert valuable agricultural lands to urban uses by encouraging infill development.

2.8-e Seek Stanislaus County cooperation in designating unincorporated land for uses compatible with adjacent City lands.

2.8-f Seek to include in the City all urbanized areas contiguous with City territory.

The older areas of the City include numerous unincorporated islands. The issue of change in public facilities and services that will accompany incorporation will need to be addressed.

2.8-g Cooperate with County agencies in planning for transportation improvements and other major projects affecting multiple agencies.

The Stanislaus County Expressway Study and the County's Congestion Management Program are two of the major projects in which the City and County are participating. Both projects are led by the Stanislaus Council of Governments (StanCOG), the County's Regional Transportation Agency and its Congestion Management Agency.

Implementing Policies

2.8-h Identify Merced and Stanislaus County General Plan designations on Turlock's General Plan Diagram.

Generally, the only areas where the County designations are not duplicated on the Diagram are those contiguous to the existing urban area that are planned for urban expansion. Figure 2–3 depicts these areas.

2.8-i Seek LAFCO approval of Sphere of Influence changes to reflect the General Plan Diagram. Initially, the areas depicted in Figure 2–3 should be included in the City's secondary Sphere of Influence.

LAFCO action would clearly demarcate those areas that are expected to be urbanized and incorporated in the future. Lands not within the City's Sphere of Influence (and outside of Keyes and Denair) are to remain subject to the County's regulations for lands designated for agricultural use. Including Turlock's expansion areas in the City's secondary sphere will mean that prezoning and annexation criteria relating to orderly expansion of the City will have to be met before development proposals will be considered.

The sphere of Influence was amended in 1993 to include the areas shown on Figure 2-3.

2.8-j Re-enter into an agreement with Stanislaus County stipulating that the City will collect and pass on to the County development fees for County improvements, and the County will refer to the City applications for development in the City's Sphere of Influence.

This policy is consistent with the Stanislaus County General Plan, which was amended following a pioneering agreement made between the City and County. Subsequent to that time, the County entered into similar agreements with each of the cities in the County. However, the agreement between Turlock and the County lapsed without renewal. This policy advocates renewal of the agreement without provision of a sales tax revenue pass-through, but with the same conditions that apply to agreements made between the County and other cities.

The City of Turlock and Stanislaus County entered into a new agreement in April of 1996.

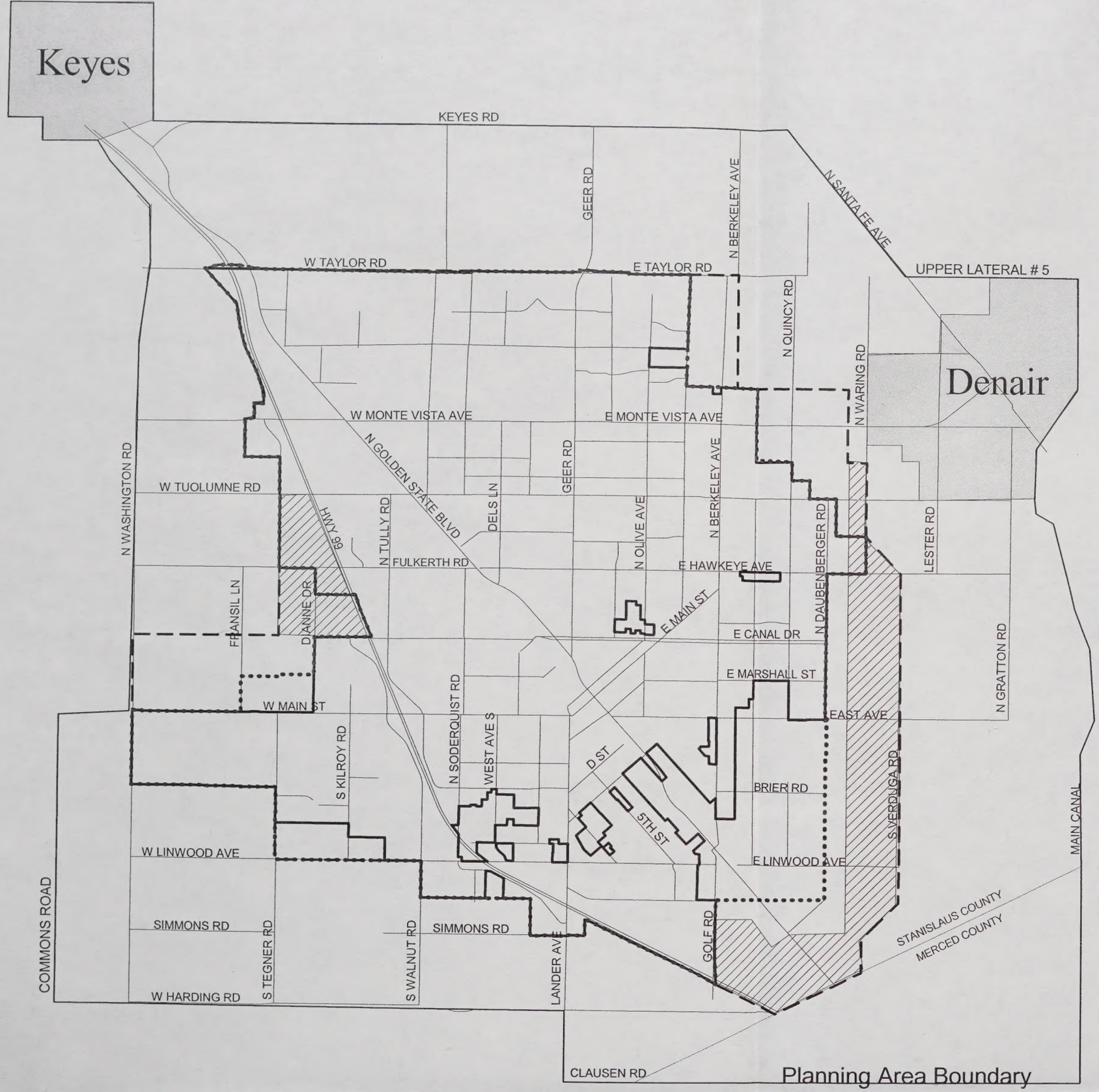
2.8-k Work with Stanislaus County to identify possible revenue tools for underwriting necessary improvements in order to encourage incorporation of County islands.

Development standards in the islands differ from those in the surrounding areas. Incorporation should be made a condition of project approval on any property in any of the islands.

2.8-l Continue to participate with StanCOG on matters of mutual concern to the City and County. These include programs such as regional expressway studies, housing needs determination, etc.

Boundaries and Modifications to Sphere of Influence

Figure 2-3



Area added to the Sphere of Influence in 1993

Primary Sphere of Influence

Secondary Sphere of Influence

Turlock City Limits

N

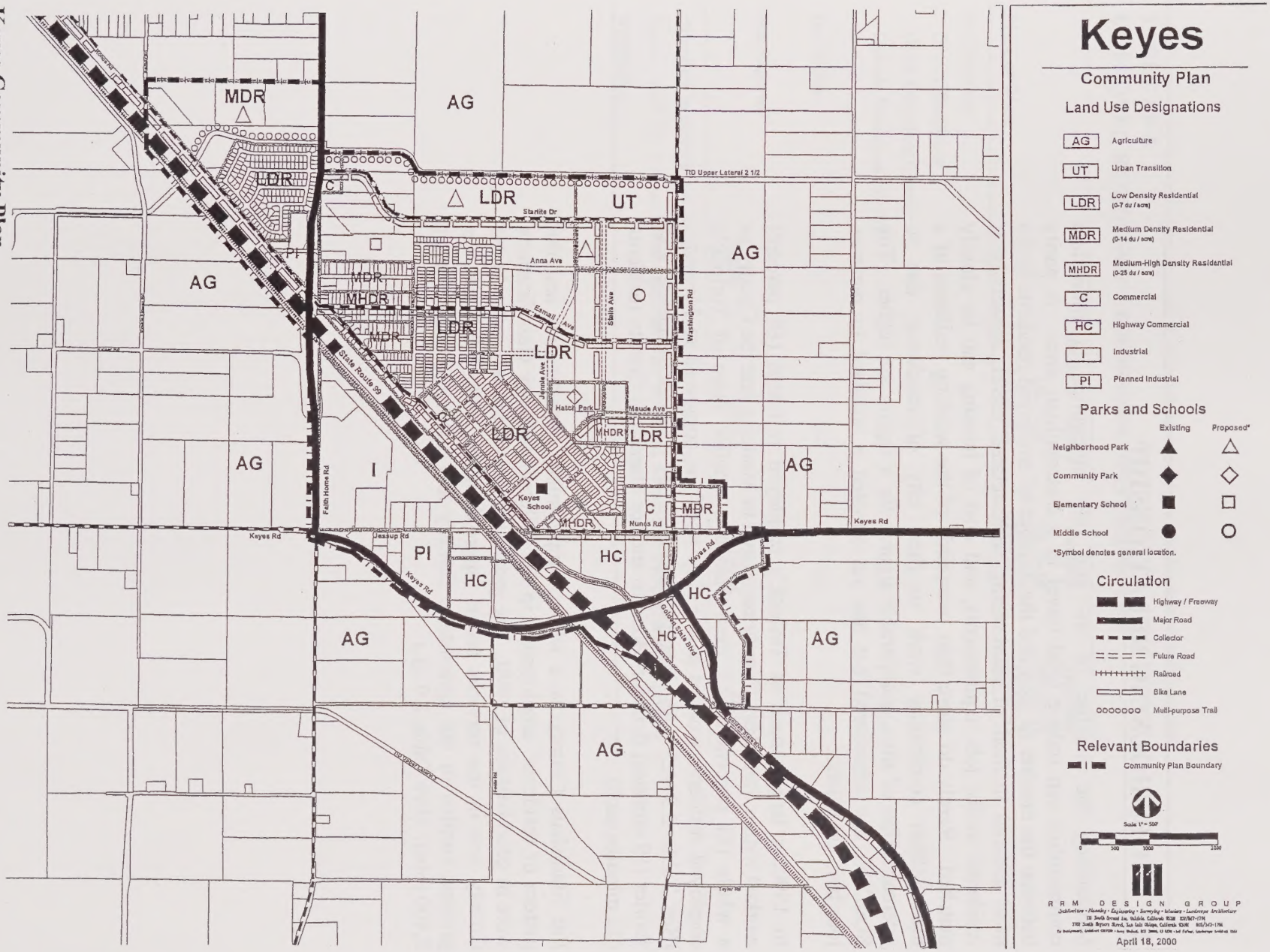
0 4000 Feet

Turlock General Plan

City of Turlock, Planning Division
Updated January, 2002

Keyes Community Plan

Figure 2-5



2.9 JOBS/HOUSING RELATIONSHIP

Minimizing the number of in- and out- commutes in individual communities can reduce total travel in a metropolitan area. A parity between the number of jobs and the number of employed residents is the most assured method of minimizing work-related travel, especially if residents' skills, job requirements, and cost of housing can be closely matched. Rarely do more than two-thirds of the working residents of a metropolitan community work in their city of residence; due to internalization of trips, comparable figures for a region are higher. The StanCOG has considered but not yet adopted a standard to measure jobs/housing balance.

In 1990, a larger share of Turlock's employed residents (86 percent) worked within Stanislaus County compared to Modesto and the County as a whole (81 percent each), even though a smaller share of Turlock's employed residents worked in the City itself, as compared to Modesto. (See Table 2.9–A.) An average commute for Turlock residents was shorter (19 minutes) than for Modesto and for Stanislaus County residents (22 minutes each).

For Stanislaus County as a whole, employment opportunities and the pattern of residents' employment in the different industry classifications were in good balance in 1990. The greatest employment deficiency in the County was in the services sector (approximately 7,800 jobs) and the greatest surplus in the agriculture, forestry and fisheries sector (about 2,400 jobs). (See Table 2.9–B.)

TABLE 2.9-A
EMPLOYED RESIDENTS' COMMUTING PATTERNS, 1990

Place of Work	Stanislaus County (as % of 151,010)[1]	Turlock (as % of 17,828)[1]	Modesto (as % of 69,663)[1]
In California:			
City of Residence	na	57.5	61.2
Other Stanislaus County	81.4	28.5	19.6
Outside Stanislaus County	16.0	11.9	16.7
Out of State	0.2	0.0	0.3
Not Reported	2.4	2.1	2.2
Total	**100.0**	**100.0**	**100.0**

[1]Numbers in parentheses indicate total employed residents.

Source: 1990 U.S. Census. **(This table will be updated when the 2000 Census data is available.)**

TABLE 2.9-B
STANISLAUS COUNTY EMPLOYMENT AND EMPLOYED RESIDENTS, 1990

Industry	Employed Residents (as % of 151,010)[1]	Employment (as % of 128,300)[2]
Agriculture, Forestry and Fisheries	7.8	11.1
Construction and Mining	8.6	6.3
Manufacturing	18.2	18.9
Transportation	4.0	2.3
Communications and Public Utilities	2.2	1.2
Wholesale Trade	4.3	4.5
Retail Trade	16.9	18.5
Finance, Insurance, and Real Estate	5.5	4.0
Services	20.7	18.3
Public Administration	3.9	6.4
Education	7.8	8.5
TOTAL	**100.0**	**100.0**

[1] Total employed residents
[2] Total number of jobs located in Stanislaus County

Sources: 1990 U.S. Census; 1990 EDD Annual Planning Information for Modesto MSA
(This table will be updated when the 2000 Census data is available.)

Though reliable data on employment by sector in Turlock and Modesto, and resulting information on the number of in-commuters is not available, comparison of employment profiles of Turlock residents reveals that Turlock residents are slightly under-represented compared to the County in the construction, services, public administration and the retail trade sectors. (See Table 2.9–C.) Employment in the manufacturing and education sectors exceeded proportionate figures for County residents.

TABLE 2.9-C
EMPLOYMENT BY INDUSTRY CLASSIFICATION, 1990

Industry	Stanislaus County (as % of 151,010)[1]	Turlock (as % of 17,828)[1]	Modesto (as % of 69,663)[1]
Agriculture, Forestry and Fisheries	7.8	7.8	2.8
Construction and Mining	8.6	7.1	7.9
Manufacturing	18.2	20.8	17.3
Transportation	4.0	4.0	3.6
Communications and Public Utilities	2.2	1.8	2.5
Wholesale Trade	4.3	4.0	4.7
Retail Trade	16.9	15.9	18.8
Finance, Insurance, and Real Estate	5.5	5.4	6.8
Services	20.7	20.0	23.1
Public Administration	3.9	2.5	4.5
Education	7.8	10.7	8.0
TOTAL	**100.0**	**100.0**	**100.0**

[1] Number in parentheses indicates total employed residents

Sources: 1990 U.S. Census
(This table will be updated when the 2000 Census data is available.)

The Private Industry Council (PIC) of Stanislaus County annually sponsors a "Occupational Outlook Report and Training Directory". Table 2.9-D compares median wages of new hires, with wages of individuals that have three years experience with the firm, in non-union firms. Seven job categories have median wages over $10.00/hour for new hires with no experience, with the highest at $15.82, computer support. A total of six job categories have median wages over $15.00/hour with 3-years experience, the highest $21.58, again in computer support.

TABLE 2.9-D
LABOR MARKET INFORMATION STANISLAUS COUNTY, 1998-1999

Job Category	Median Wage[1] New Hire, No Experience	Median Wage 3 years experience with firm
Administrative Assistant	$13.94	$18.09
Automotive Technicians	$10.00	$18.00
Cannery Workers	$6.30	$8.12
Cashier	$5.75	$8.25
Child Care Worker	$5.75	$7.00
Computer Network Technicians	$10.41[2]	$21.08
Computer Support	$15.82	$21.58
Cooks-Restaurant	$6.00	$9.00
Counter & Rental Clerks	$5.75	$6.88
Dental Assistants	$7.50	$11.00
Food Service Manager	$8.85	$12.79
Guards	$5.80	$7.25
Instructional Aides	$8.22	$9.12
Licensed Vocational Nurses	$13.50	$15.43
Physical Therapy Aides	$6.75	$9.25
Physical Therapy Assistant	$15.34	$19.00
Salesperson-Retail (except Auto)	$6.00	$7.50
Surgical Technicians	$9.07	$10.50
Waiters & Waitresses	$11.25	$16.25
Welders & Cutters	$7.50	$11.00

Source: Stanislaus County Occupational Outlook Report, 1998-1999
[1] Median wage rates for non-union firms
[2] Wage for union firm

The California Employment Development Department analyzes labor market information projections in seven-year increments. Table 2.9-E illustrates the projected non-farm employment and is projected to reach 152,200 jobs by 2004, a 15.6 percent increase. The four largest industries in Stanislaus County in 1997 were trade, services, manufacturing and government. Of these, the largest was trade with an annual average employment of 33,500 jobs. During the projection period, 1997-2004, most of the jobs created in the County will remain in the above mentioned categories.

TABLE 2.9-E
WORK FORCE EMPLOYMENT BY TYPE
STANISLAUS COUNTY, 1997 AND 2004

Work Force	1997	2004
None-Farm Employment Wage and Salary	**131,700**	**152,200**
Manufacturing	**26,100**	**30,300**
Durable	7,700	8,800
Non-Durable	18,400	21,500
Construction	**6,800**	**7,100**
Transportation and Public Utilities	**5,400**	**6,300**
Trade	**33,500**	**37,700**
Retail	27,400	31,500
Wholesale	6,100	6,200
Finance, Insurance, & Real Estate	**4,500**	**4,800**
Services	**32,100**	**39,200**
Government	**23,400**	**26,800**

Source: State of California, Employment Development Department, Labor Market Information Division, Information Services Group

Table 2.9-F identifies labor force and employment trends for Turlock, Modesto and Stanislaus County. During the years 1991 and 1995 all areas experienced a decline of persons employed. A slight decline is illustrated for March 1999; however, this number may increase during the agriculture seasonal employment summer months. The unemployment rate peaked in 1993, 14.8 percent in Turlock, and has continued to decline to 10.8 percent in 1998.

The Center for Public Policy Studies completed the "Critical Links" study in November 1998.[4] This report used a variety of data sources to explore the County's economic development, probe the sources of employment

[4] Entin, K., et.al. "Critical Links: Employment Growth, Unemployment, and Welfare-To-Work in Stanislaus County" (November 1998).

growth, and examine the characteristics of the unemployed and barriers to employment. This study analyzes the "anomaly of high unemployment," the opposing outcomes of relatively high wage and salary employment growth rates and concurrently high unemployment rates.

> *While the reported unemployment rate for Stanislaus County offers a useful snapshot of labor demand and supply conditions, it is not the ideal benchmark for assessing either economic performance or hardship. It is, in fact, the application of a national standard (not employed but looking for work) to a local area with a particular industry structure...As a result of seasonality, temporarily laid off workers are shifted from the ranks of the employed to the unemployed insurance system. These "job losers" constitute a larger proportion of the unemployed population in Stanislaus County than in many other areas.*
>
> ***Unemployment insurance records reveal that more than three-fifths (or 60%) of the total applying for benefits in 1997 expected to return to their jobs.*** *What this suggests is that statistics on the scale and distribution of reported and adjusted unemployment makes it exceedingly difficult to develop a "true" unemployment rate. But the difficulties should not deflect attention away from the real focus: those without jobs and without prospects of future employment, those who work seasonally, temporarily, and part-time and prefer full-time and year-round employment, and future workers in school who need to be prepared to enter the job market.*[5]

[5] IBID, pp. 59-60

TABLE 2.9-F
LABOR FORCE DATA
TURLOCK, MODESTO, STANISLAUS COUNTY, 1990-1999

AREA NAME	1990[1]	1991[1]	1992[1]	1993[1]	1994[1]	1995[2]	1996[3]	1997[3]	1998[3]	1999[4]	Change 1990-1999	Change 1993-1999
CITY OF TURLOCK												
Labor Force	20,970	21,130	22,090	22,410	22,690	22,400	22,580	23,090	23,490	23,460	+2,490	+1,050
Employment	18,790	18,410	18,870	19,100	19,550	19,330	19,770	20,440	20,960	20,770	+1,980	+1,670
Unemployment	2,180	2,720	3,220	3,310	3,140	3,070	2,810	2,650	2,530	2,690	+510	-620
Unemployment Rate	10.4%	12.9%	14.6%	14.8%	13.8%	13.7%	12.4%	11.5%	10.8%	11.5%	+1.1	-3.3
CITY OF MODESTO												
Labor Force	82,120	82,720	86,540	87,790	88,880	87,760	88,430	90,400	91,970	91,850	+9,730	+4,060
Employment	73,440	71,920	73,720	74,640	76,390	75,550	77,260	79,850	81,910	81,140	+7,700	+6,500
Unemployment	8,680	10,800	12,820	13,150	12,490	12,210	11,170	10,550	10,060	10,710	+2,030	-2,440
Unemployment Rate	10.6%	13.1%	14.8%	15.0%	14.1%	13.9%	12.6%	11.7%	10.9%	11.7%	+1.1	-3.3
STANISLAUS COUNTY												
Labor Force	180,600	182,500	191,300	194,200	196,300	193,800	195,000	199,100	202,400	202,200	+21,600	+8,000
Employment	159,200	155,900	159,800	161,800	165,600	163,800	167,500	173,100	177,600	175,900	+16,700	+14,100
Unemployment	21,400	26,600	31,500	32,400	30,700	30,000	27,500	26,000	24,800	26,300	+4,900	-6,100
Unemployment Rate	11.8%	14.6%	16.5%	16.7%	15.7%	15.5%	14.1%	13.0%	12.2%	13.0%	+1.2	-3.7

[1]1996 Benchmark
[2]1997 Benchmark
[3]1998 Benchmark
[4]March 1999, 1998 Benchmark

Source: State of California Employment Development Department, Labor Market Information Division

Guiding Policies

2.9-a Maintain a balance between jobs in the different sectors in Turlock and the number of employed residents.

This means increasing employment opportunities for Turlock residents who work elsewhere and residential opportunities for those who work in Turlock but live elsewhere.

2.9-b Undertake efforts to increase the percentage of employed residents who work in the City to 60 percent of the total.

Implementing Policies

2.9-c Expand land supply for development.

The General Plan increases land designated for both housing and employment-generating land uses.

2.9-d Conduct a survey to determine the number of jobs by sectors in Turlock to target those with the greatest imbalance.

A secondary source survey should be fairly easy to conduct. The largest employers have been identified in the General Plan. Other sources of information include the Turlock Chamber of Commerce, the Department of Commerce and the Employment Development Department.

These sectors include retail trade, where the situation should alter with the planned construction of regional retail facilities, and public administration.

Community Development Services reorganized to create an Economic Development and Redevelopment Division in 1993. The new division works independently and with SCEDCO on job retention and job recruitment efforts.

2.9-e Emphasize economic development efforts that will attract and recruit industrial activities that complement the City's agricultural setting while enhancing other positive aspects of the City.

There are a number of marketing materials available emphasizing the opportunities of doing business in Turlock.

The City of Turlock Economic Development Division also serves as the "Ombudsman" for the City, which can act as a facilitator in the City process, if necessary. Community Development continues to evaluate ways to improve the quality of the services provided at the City of Turlock through various educational type workshops.

2.10 URBAN RESERVE

The 1992 General Plan Diagram classifies land in the Turlock Planning Area for a variety of land uses, which the City believes addresses future community needs through the year 2012. In 1999, the City amended the 1992 General Plan and General Plan Diagram to distinguish between land that it believes should remain committed to agricultural for the foreseeable future and land best suited to accommodate urban development within or just beyond the time frame of the 1992 General Plan. The 1999 General Plan Amendment states land committed to agricultural will remain classified "Agriculture", while land suited for urban development will be reclassified as "Urban Reserve". It is the City's intent that land classified as Urban Reserve should remain agricultural in use over the short-term, but will eventually give way to urban uses as the community's economic needs continue to evolve over time. Conversely, the 1999 General Plan amendment also clarified the City's intent for the long-term conservation of land classified as Agriculture within its Planning Area. Policies that address the timing and circumstances for the reclassification of land classified Urban Reserve to specific land use classifications to accommodate urban uses are outlined below.

Guiding Policies

2.10-a Ensure the City's ability to accommodate future urban growth and development, particularly industrial and commercial uses to the west and south, beyond the 2012 time horizon of the General Plan.

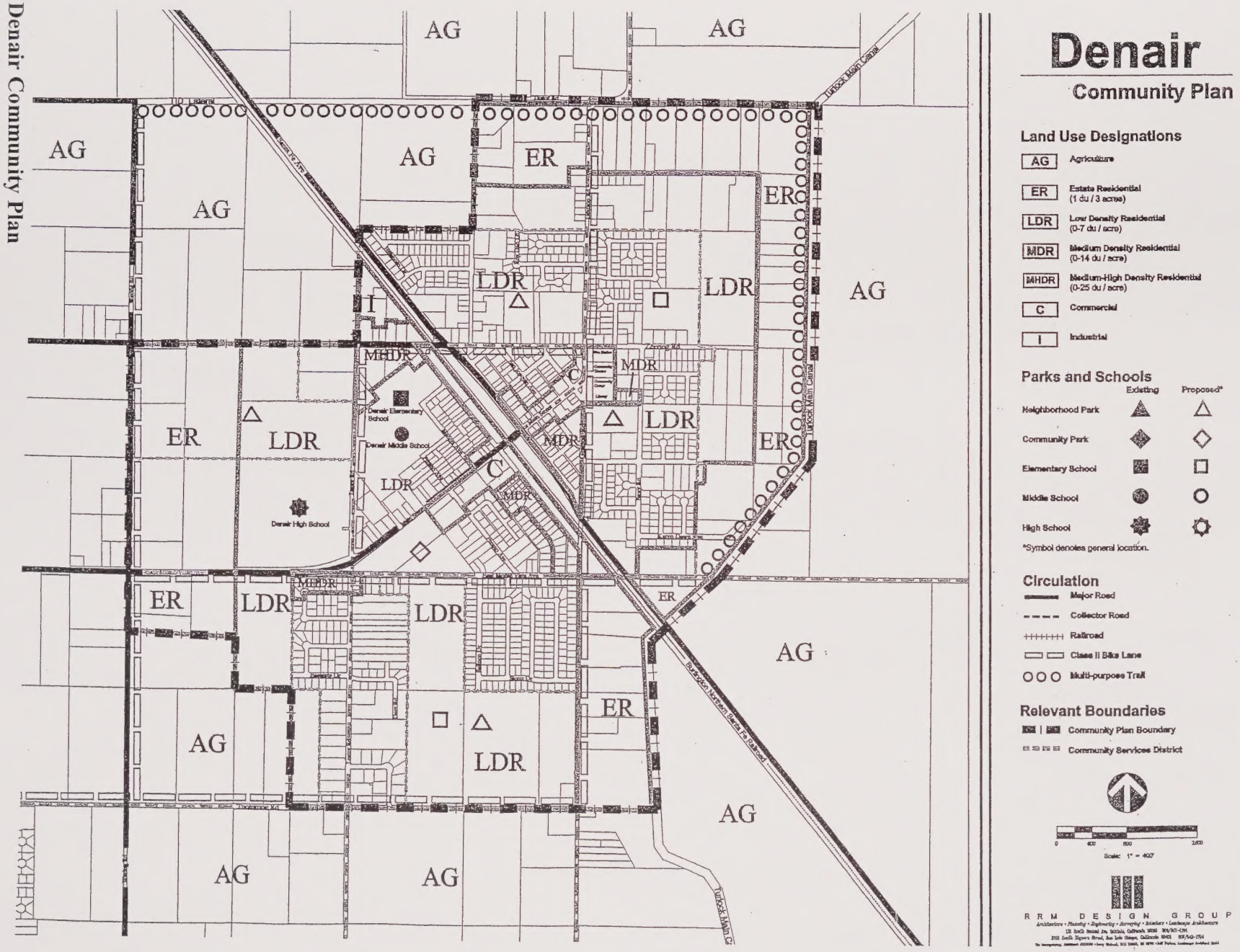
Implementing Policies

2.10-b Land classified Urban Reserve located either within the City or its Sphere of Influence may be reclassified to accommodate specific urban uses at any time consistent with the city's growth management (Section 2.7), annexation (including Quadrant and Area-Wide Planning requirements) and development policies.

2.10-c Land classified Urban Reserve, located within the City's planning area but, situated outside the city's Sphere of Influence, may not be reclassified to accommodate specific urban uses and annexed (including Quadrant and Area-Wide Planning requirements) until one of the following occurs:

a) the City Council finds that the City has less than a four year supply of vacant land for residential development in its inventory; or
b) it has been at least ten years since the area was reclassified Urban Reserve; or
c) the City Council, by a 4/5ths affirmative vote, finds in the public interest to reclassify property to accommodate an industrial or commercial use that will be the source of significant employment. A comprehensive General Plan Amendment shall accompany any secondary residential use in this area.

Denair Community Plan
Figure 2-4



Section 3
Housing Element Summary

State requirements for housing elements are more detailed and exacting than for any other general plan element. California Government Code sections 65580 through 65589 require that housing elements contain:

> An assessment of housing needs and an inventory of resources and constraints relevant to meeting those needs;
>
> A statement of the community's goals, quantified objectives, and policies relevant to the maintenance, improvement and development of housing; and
>
> A program that sets forth a five-year schedule of actions that the local government is undertaking or intends to undertake to implement the policies to achieve the goals and objectives of its housing element.

As required by State law, Turlock's Housing Element identifies residential sites adequate to accommodate a variety of housing types for all income levels, analyzes governmental constraints to housing maintenance, improvement and development, addresses conservation and improvement of the condition of the existing affordable housing stock, and outlines policies to promote housing opportunities for all persons.

The complete Housing Element, including the data and analysis required by State guidelines as well as program policies, is published as a separate document. This section summarizes the major findings of the analysis and includes all adopted policies of the Housing Program.

3.1 SUMMARY OF EXISTING HOUSING STOCK AND TENURE

For a community of its size, Turlock offers a fairly wide range of housing resources. Single-family units comprise a large majority (about 65 percent in 1990) of Turlock's housing stock. Increasing housing costs in recent years have spurred a growing demand for apartments. Multifamily units

represented 30.3 percent of the City's housing stock in 1990 and accounted for over half of the units added between 1980 and 1990. Of a total housing stock of 15,400 units in 1990, 4,062 were apartment units (See Table 3.1-A). Turlock's housing stock includes a small number of condominium units and manufactured (including mobile) homes, as well as group-care facilities and a shelter for the homeless.

In 1990, 47.5 percent of households were renters, only a slight increase from 45.7 percent in 1980. The Stanislaus Council of Govermnents (StanCOG) estimates that this proportion will increase to 51.5 percent by 2010.

TABLE 3.1-A
CHARACTERISTICS OF TURLOCK HOUSING STOCK, 1990

Type	Number of Units	Percent of Total	Owner-Occupied[1]	Percent Renter-Occupied[1]	Percent Percent Vacant[2]
Single-family detached	9,395	61.0	76.4	23.6	3.4
Single-family attached	560	3.6	36.6	63.4	2.0
Duplex	723	4.7	1.6	98.4	3.2
3 to 4 units	955	6.2	0.9	99.1	4.7
5+ units	3,107	20.2	0.2	99.8	9.2
Mobile Homes	549	3.6	95.6	4.4	3.5
Other	111	0.7	44.7	55.3	7.2
Total	15,400	100.0	52.5	47.5	4.6

[1]Based on number of occupied units (14,689).
[2]Based on total units (occupied and vacant).
Source: 1990 U.S. Census.

3.2 SUMMARY OF HOUSING NEED

The assessment of housing needs in Turlock is organized in four parts: housing affordability, immediate need, special needs, and regional need.

HOUSING AFFORDABILITY

Households having above-moderate incomes (over 120 percent of the 1990 County median income of $29,793) are well served by Turlock's single-family housing market, and are able to choose among neighborhoods and housing types. Moderate income households, those earning 80 - 120 percent of median, have some choice of housing units, especially resale homes, but find it increasingly difficult to purchase single-family homes unless they have equity in an existing home. Choices for first-time homebuyers are clearly limited.

Low-income and very-low income households, which make up approximately 20 percent of the population, are largely excluded from ownership housing opportunities, though there are exceptions among resale units - about 10 percent of sales reported by the Board of Realtors in 1990 were at prices affordable to low-income households. By contrast, none of the new housing projects surveyed were offering single-family units affordable to low-income households.

For low-income households, which are not well-served by the ownership market, rental housing provides a good match between affordability and availability, even for large size units. For very-low-income households, smaller units are generally available and affordable. Data on waiting lists for below-market-rate housing, however, reveal that multiple bedroom units are essentially unaffordable to very-low-income households.

IMMEDIATE NEED

Indicators of immediate need are the number of households overpaying for housing, those living in overcrowded conditions, applications and waiting lists for below-market-rate housing, vacancy rates, and the number of people who are currently homeless.

Overcrowding. According to the 1990 Census, 1,519 households in Turlock, 10.3 percent of the total, lived in overcrowded conditions. Of these households, 762 (5.2 percent of total) were "severely" overcrowded, with more than 1.51 people per room. This is less than the degree of overcrowding for the State as a whole. In 1990, 12.3 percent of the State's households were overcrowded, 7.1 percent severely so. In Turlock, 28 percent of overcrowded households are owners; 72 percent are renters.

Vacancy Rate. Turlock's overall vacancy rate in 1990 was 4.6 percent (U.S. Census), compared to an overall vacancy rate of 5.0 percent for

Stanislaus County. A vacancy rate of 5.0 percent overall is considered ideal, characterizing a healthy market.

Overpayment. Overpayment for housing is defined as spending more than 30 percent of gross household income for housing costs (rent and utilities). According to the 1990 Census, 44.6 percent of renter households spend 30 percent or more of their income for housing costs, despite the growing number of multifamily units available. Homeowners were considerably better off as only 23.8 percent of them were overpaying.

In 1990, a total of 2,958 renter households (45 percent) were overpaying; all had a gross household income of less than $35,000. Based on census income breakdowns, 87 percent of overpaying renter households earned less than $20,000 (the 1990 Countywide lower income threshold was $23,830).

Of owner-occupied households, only 24 percent overpaid for housing costs. Of these, 41 percent earned less than $20,000. Overall, 34 percent of households in Turlock were overpaying for housing costs in 1990. Of these, 71 percent earned less than $20,000.

Homelessness. The housing needs of those seeking emergency or transitional shelter has dramatically increased in the last ten years. Nationwide, the fastest growing population in need of shelter are families with children. This increase can be attributed to rising unemployment and decline in affordable housing. A significant percentage of mentally ill are homeless, due in part to relaxation of guidelines for State mental health care institutions. Others in need are those with drug and alcohol problems, battered women and children, and evicted tenants.

The homeless population in emergency shelter in Turlock was counted at 81 in the 1990 Census, with one person visible on the street (0.2 percent of the City population). Corresponding figures for the County indicate 399 people were staying in emergency shelter at the time the Census was taken, while 44 were counted "visible on the street" (0.12 percent of the County population).

Waiting Lists for Subsidized Housing. As of March 1992, all public housing units in the County were occupied and there was a waiting list of approximately 800 families.

The Stanislaus County Housing Authority periodically accepts new applications for public housing. Of the 4,500 applications distributed for

two- and three-bedroom units in 1991, 1,700 respondents applied for only 612 units. Another 4,500 applications were distributed for one-, four-, and five-bedroom units and only 750 applicants responded. Clearly, the greatest demand is for two- and three-bedroom units. There is an estimated turnover rate of 109 units per year, and an estimated occupancy rate of 98 percent. The average wait for conventional low-rent public housing is estimated at three to four years.

As of March 1992, there were 3,185 applicants in Stanislaus County waiting for assistance through the Section 8 program. The type of unit most in demand is the two-bedroom, followed by three-bedroom units, one-bedroom units, and finally, four-bedroom units.

SPECIAL NEEDS

A comprehensive housing strategy must consider requirements of households whose special needs are often not satisfied in the marketplace. Such households include the disabled, elderly, large families, femaleheaded households, the homeless, and farmworkers. The populations with the most pressing special needs in Turlock seem to be female-headed households, large families, and homeless persons.

Seniors. Seniors are identified as a group with special housing needs because of a high incidence of limited incomes and physical constraints. In 1990, 12.5 percent of Turlock's population (5,275 persons) was age 65 or older; approximately 72 percent are homeowners; 28 percent rent.

Housing units best suited to this group are small units near transportation, shopping and other services. The elderly often require special design considerations such as ramps and handrails to assist mobility. Security is also a concern for seniors, primarily because they often live alone and are more vulnerable to crime.

The City of Turlock has two elderly housing complexes. The senior citizen complexes in Turlock are Denair Manor and Covenant Village. There are several other rest home facilities in Turlock, which are not exclusively for seniors. There are 823 residents in the City's nursing homes, according to the 1990 Census.

Information that emphasizes current income can be a misleading indicator of the housing needs of many senior households because they have equity in an existing home or other types of investments and savings even though they may have low incomes. While this is true for some Turlock seniors,

44 percent of those receiving Section 8 certificates in the City are elderly, indicating a segment of the senior population is in need of housing assistance.

Disabled. As with the homeless, it is difficult to estimate the true needs of the disabled. 1990 Census data shows that 15 persons were living in institutionalized group quarters other than nursing homes, correctional institutions, psychiatric hospitals, or juvenile institutions. This provides an approximation of the number of disabled persons in Turlock but is a poor estimate of need, since by definition, these people are already being served. This estimate appears low since according to the Stanislaus County Housing Authority, in 1991, approximately 18 percent of those receiving Section 8 certificates in Turlock (62 people) were disabled.

More detailed census data reveals that there were 2,657 noninstitutionalized persons between the ages of 16 and 64 who had a mobility or self-care limitation. This means that for six months or more they had a health condition which made it difficult to go outside the home alone or to take care of their own personal needs such as dressing, bathing, or getting around inside the home. Again, this statistic only approximates the number of long-term disabled residents. According to the 1980 Census, there were 1,526 households with at least one disabled member.

Services that address the housing needs of the disabled generally focus on modifications to existing homes or provide referrals on a case-by-case basis. Most programs are offered by private non-profit agencies that disabled persons must seek out.

Female-Headed Households. Estimates from the 1990 Census show that there are 1,757 female-headed households (12 percent of the total) in Turlock with no husband present in the home. Of these, 71 percent have children under the age of 18 (8.5 percent of the total households in Turlock).

The majority of households receiving Section 8 assistance are female-headed households. Of the 322 Section 8 certificates administered to Turlock households in May 1991, 262 (81 percent) went to families headed by a woman with no husband present in the home. Because typically these are households with children, housing suited to their needs is preferably near outdoor play space or parks, and located near schools or child care facilities.

Large Families. Many large households face difficulty in finding housing because of the relative scarcity of affordable large units. Large very-low and low-income households obviously have the greatest difficulty. According to the 1990 Census, 13.6 percent of the households in Turlock have five or more persons, up from the 1980 Census figure of 9.5 percent. Almost half of these large households are renting. While few existing or proposed apartments have three or more bedrooms, single-family homes made up 39 percent of the rented units in 1990.

Homeless. While only one person was counted as living on the street in the Turlock in the 1990 census, 81 persons were counted residing in emergency shelter for the homeless in Turlock and none in the unincorporated Planning Area. Methods for counting the number of homeless in a community have been criticized for substantial undercounting of the "hidden" homeless.

Currently there is only one shelter in Turlock, which cannot serve the needs of the entire population in need of emergency shelter.

Farmworkers. The State Employment Development Department estimated that the number of farmworkers in Turlock declined from 225 to 191 between 1980 and 1989. Much of the seasonal farmworker labor force has been absorbed into the year-round housing market. According to Stanislaus Council of Goverments (StanCOG), however, countywide the need for farmworker housing remains significant for two reasons: 1) the demand for housing has always exceeded the supply, and 2) housing unit construction has not kept pace with demolition.

StanCOG estimates that between 1990-1997, Turlock will need to provide 115 units to satisfy farmworker needs, 17 percent of the County responsibility of 693 units.

REGIONAL NEED

StanCOG projections of the numbers of units that should be affordable to each income group are based on the income distribution for the County as a whole (in 1979 dollars) and the determined housing need is based on County growth estimates. (See Table 3.2-A). Of Turlock's 5,555 unit regional share, StanCOG estimates that 59.7 percent should be single-family detached and the remaining single-family attached, multifamily, and mobile homes. (See Table 3.2-B.)

The City's ability to meet regional housing needs is discussed in Section 9 of the Housing Element.

TABLE 3.2-A
StanCOG ASSUMED HOUSING CONSTRUCTION NEEDS BY INCOME, 1990-1997

Income Group	Distribution	Stanislaus County	Turlock	Modesto
Very Low	24.0%	6,939	1,333	2,805
Low	17.0%	4,916	944	1,987
Moderate	21.0%	6,072	1,167	2,455
Above Moderate	38.0%	10,987	2,111	4,441
TOTAL	100.0%	28,915	5,555	11,688

Totals may not add due to rounding.
Sources: Stanislaus Council of Governments; Blayney Dyett Greenberg.

TABLE 3.2-B
StanCOG DISTRIBUTION OF ASSUMED HOUSING NEEDS 1990-1997 BY TYPE

Type	Stanislaus County	Percent	Turlock[1]	Percent	Modesto[1]	Percent
Single-Family Detached	19,899	68.8%	3,315	59.7%	7,843	67.1%
Single-Family Detached, Multifamily and Mobile Homes	9,016	31.2%	2,240	40.3%	3,845	32.9%
Total	28,915	100.0%	5,555	100.0%	11,688	100.0%

[1]Maintains current share of County housing units.
Source: Stanislaus Council of Governments.

3.3 HOUSING POLICIES AND PROGRAMS

Turlock's housing goals, objectives and programs address varied dimensions of the housing market and a range of housing resources. The program components are discussed in detail in the Housing Element. See Tables 3.3-A and B for quantified objectives. The components of the Housing Action Program are summarized in Table 3.3-C; cross-references to the Housing Element text are provided.

HOUSING PROGRAM GOALS AND OBJECTIVES

- Provide housing for households in all income categories as calledfor in the Regional Housing Needs Report prepared by the Stanislaus Council of Governments.

- Facilitate the provision of market-rate housing that will fulfill the needs of above-moderate, moderate, and low-income households.

- Target public resources toward conservation of existing housing and construction of new housing for very-low- and low-income households.

- Make sufficient land available for residential development to meet the City's share of regional housing needs.

- Remove constraints to the production and conservation of housing unless those constraints are necessary to achieving vital City objectives.

- Maintain consistency among General Plan elements as the Plan is implemented.

- Continue to provide opportunities for persons from all economic segments of Turlock to participate in design and implementation of the Housing Program.

- Work to provide equal access to housing for all households.

QUANTIFIED OBJECTIVES, 1992 – 1997

Quantified objectives for each housing program component are identified in the tables below. The totals are:

TABLE 3.3-A
NEW CONSTRUCTION OBJECTIVES BY INCOME CATEGORY: COMPARISON OF StanCOG AND HOUSING ELEMENT DISTRIBUTIONS

	StanCOG Distribution 1990 - 1997		**Housing Element Distribution 1992 -1997**	
Income Group	Percentage	Number of Units	Percentage	Number of Units
Very Low	24%	1,333	5%	200
Low	17%	944	41%	1,640
Moderate and Above Moderate	59%	3,278	54%	2,161
Total		5,555		4,001

TABLE 3.3-B
CONSERVATION, REHABILITATION, AND ASSISTED HOUSEHOLDS OBJECTIVES

Income Group Households	**Conservation**	**Rehabilitation**	**Assisted**
Very Low	50	30	100
Low	50	58	250
Moderate	50	0	0
Total	150	88	350

TABLE 3.3-C
SUMMARY OF TURLOCK HOUSING PROGRAMS 1992-1997

Program Purpose/Component	Responsible Agency	Funding Source	Goal[1]	Affected Income Group(s)	Page
I. IDENTIFICATION OF ADEQUATE SITES					
IA. Increase housing sites for market rate housing	Community Development Department; City Council	na[2]	To accommodate up to 20,000 units over 20-year period	above-moderate, moderate, low	99
IB. Increase the supply of land designated for single-family attached and multifamily housing	Community Development Department; City Council	na	To accommodate 2,850 units over 20-year period	all	100
IB2. Continue efforts to establish a land banking program for affordable housing development	Housing Program Staff; Community Development Dept.; City Council	Redevelopment Set-aside fund, Housing Trust Fund	na	low, very low	102
IC. Allow manufactured housing in all residential zones	Community Development Department; City Council	na	na	na	104
ID. Identify appropriate sites for homeless shelters and transient housing	Community Development Department	na	12 units	very low	105
II. DEVELOPMENT OF HOUSING FOR LOW- AND MODERATE-INCOME HOUSEHOLDS					
IIA. Use the City's Housing Trust Fund to assist in the preservation and development of housing for low-income households	Housing Division of the Community Development Department	CDBG, redevelopment tax increment, housing payment	na	low, moderate	107
IIB. Create a redevelopment project area and program	Community Development Department; Planning Commission; City Council	Redevelopment tax increment	0 during 5-year period	low, very low (beyond 5 years)	109
IIC. Consider establishment of a housing payment for affordable housing	Housing Division of the Community Development Department; City Council	Housing payment from new development	na	low, very low	110

TABLE 3.3-C
SUMMARY OF TURLOCK HOUSING PROGRAMS 1992-1997

Program Purpose/Component	Responsible Agency	Funding Source	Goal[1]	Affected Income Group(s)	Page
IIC2. Consider the feasibility of an inclusionary zoning program for the development of affordable housing	Housing Division of the Community Development Department; City Council	na	not quantified	low, very low	112
IID. Consider a program offering a subsidy of fee payments or delayed payments from units affordable to low- and very low-income households	Community Development Department; City Council	housing payment; redevelopment tax increment	236 units	low, very low	114
IIE. Support Article 34 referendum	City Council	na	na	low, very low	115
IIF. Through the Growth Management Program, reserve building permits for affordable units	Community Development Department	na	236 units	low, very low	116
IIG. Establish cooperative agreements with a non-profit housing corporation as a support agency to the City	Housing Program Staff; City Council	na	60 units	low, very low	117
IIH. Create a loan/grant program to assist low- and very-low-income households with move-in costs	Community Development Department; City Council	housing payment	350 units	low, very low	119
IIi. Adopt an ordinance specifying incentives to be provided to developers of lower income housing	Community Development Department; City Council	na	not quantified	low, very low	121
III. REMOVAL OF GOVERNMENTAL CONSTRAINTS					
IIIA. Growth Management Program review	Community Development Department	na	na	na	123
IIIB. Revise zoning ordinance	Community Development Department; City Council	na	not quantified	all	125
IIIC. Make more sewage treatment capacity available to residential users	City Utilities Department; Community Development Department	na	see IA	all	127

TABLE 3.3-C
SUMMARY OF TURLOCK HOUSING PROGRAMS 1992-1997

Program Purpose/Component	Responsible Agency	Funding Source	Goal[1]	Affected Income Group(s)	Page
IIID. Investigate distribution of fees between single- and multifamily housing	Community Development Department; City Council	na	na	all	128
IV. CONSERVE AND IMPROVE THE EXISTING AFFORDABLE HOUSING STOCK					
IVA. Rehabilitation Loan Program	Housing Program Staff	CDBG, HOME	88 units	low, very low	129
IVB. Give priority to loan applicants seeking to make housing units accessible to disabled residents	Housing Program Staff of the Community Development Department	na	na	all	130
IVC. Reduce number of nonconforming units	Community Development Department; City Council	na	150	all	131
IVD. Adopt special standards for dwelling units in buildings of historic and architectural merit	Community Development Department; City Council	na	40 units	all	132
V. ASSURE EQUAL HOUSING OPPORTUNITY IN TURLOCK					
VA. Continue to work with the Community Housing Resources Board	Housing Program Staff	na	na	all	133
VI. PUBLIC PARTICIPATION IN HOUSING DECISIONS					
VIA. Continue the work of the Turlock Affordable Housing Task Force	Housing Program Staff; City Council	na	na	all	135
VIB. Continue the work of the TCHRB	Housing Program Staff	na	na	all	136
VIC. Hold public hearings on use of federal funds as required by federal regulations	Community Development Department	na	na	all	137
VID. Continue appointments to the Affordable Housing Task Force of community members representing diverse segments of the City's population	City Council	na	na	all	138

TABLE 3.3-C
SUMMARY OF TURLOCK HOUSING PROGRAMS 1992-1997

Program Purpose/Component	Responsible Agency	Funding Source	Goal[1]	Affected Income Group(s)	Page
VIE. Hearings and environmental review for project approvals	Community Development Department; City Council; Planning Commission	na	na	all	139
VII. OPPORTUNITIES FOR ENERGY CONSERVATION					
VIIA. Establish development and construction standards that promote energy conservation	City Council	na	na	all	141
VIIB. Provide energy conservation assistance within the housing rehabilitation program	Community Development Department	HOME and other grant funds	not quantified	all	142
VIII. IMPLEMENTATION MONITORING AND GENERAL PLAN CONSISTENCY					
VIIIA. Continue to incorporate housing program implementation monitoring as part of the City's annual General Plan report	Community Development Department	na	na	all	143
VIIIB. Adopt the Housing Element as part of a comprehensive General Plan revision	Community Development Department; City Council	na	na	all	144

[1]Assisted households or constructed units.
[2]na = Program requires City staff time to be paid for from the City's General Fund; a specific funding source is not identified.
Sources: City of Turlock Department of Community Development; Blayney Dyett Greenberg.

Section 4
Public Facilities and Services Element

Although not required by State law, this section of the Plan integrates text and policies about the provision of different public facilities and services in Turlock. The close relationship between schools, parks, and recreation is highlighted.

4.1 PARKS AND RECREATIONAL OPEN SPACE

Park and recreation facilities rank high on the list of concerns for Turlock residents; they were among the top five issues identified at the General Plan kick-off meetings. The provision of open space and development of new parks also found strong support in the public opinion survey conducted as part of the Plan revision process.

This section contains policies for parks and recreational links and corridors. It fulfills State requirements for addressing issues related to open space for outdoor recreation. The policies and goals contained herein shall be implemented through the Turlock Parks Master Plan, adopted by the City Council in July of 1995.

The General Plan Diagram indicates the approximate size and location of park and recreation facilities. Figure 4–1 distinguishes these as existing or planned for future development as of 2002. Locations of proposed facilities are generalized; appropriate sites in the vicinity of the depicted locations may be approved without amending the General Plan.

Some of the most visible physical features of a community are its public outdoor parks and community recreation programs. These provide an important opportunity for residents to enjoy recreational opportunities that enhance their physical health and well-being. In fact, public parks and recreation programs contribute greatly towards establishing the community's "quality of life." In responding to the City's Public Opinion Survey conducted in August 1990, those residents polled placed considerable emphasis on the desirability of parks and recreation facilities. Within the general category of important issues facing the City, residents identified four specific issues related to this topic that they felt the City should be doing more of: preserving more community open space,

developing more recreation facilities, developing more neighborhood parks, and providing more youth activities.

As of 1999, responsibility for park and recreation activities in Turlock falls between two separately administered City Service Areas. The maintenance of all City-owned landscaped areas, including parks, street medians, and parkway strips, and other open space lands is administered through the Public Service Maintenance Division of the Municipal Services Area. All recreation programs sponsored by the City, the renting and maintenance of all public buildings and the reservation of all City parks is administered by the Recreation & Neighborhood Services Division of Turlock Police Services.

INVENTORY AND CLASSIFICATION

Turlock's park system embraces a wide variety of community parks, neighborhood-serving city parks, pocket parks, and neighborhood-school parks. Several parks also serve as water detention basins. There are no designated regional parks. Existing parks are inventoried in Table 4.1–A for 1990, 2000 and 2002. The 1990 inventory provided in the 1992 General Plan establishes the current city standard. The 2000 inventory is based upon the 2000 Census and establishes a standard for parkland dedication in accordance to the Quimby Act. The 2002 inventory provides the most recent inventory for this document. Existing and planned park and recreation facilities are classified into the following categories.

Neighborhood-Serving City Parks. This classification consists of parks or playgrounds devoted primarily to serving a small portion of the City. Park facilities are usually oriented toward the recreational needs of children, but may also include volleyball courts, half-size basketball courts, and picnic and play areas that serve all age groups. No restrooms or off-street parking need be provided. Neighborhood-serving city parks should be located along arterial or collector streets. Existing neighborhood-serving city parks are in the 1.8 – 15.0 acre range; planned parks are sized around 5 acres, depending on needs of the neighborhood in which they are located. Pocket parks are also included in this classification; no special size or location standards are specified.

Neighborhood School Parks. This classification consists of recreational parks or playgrounds built adjacent to, but separate from educational buildings and facilities. A school park provides for neighborhood recreation as well as the needs of the adjacent educational facilities. Existing school parks are available for community use. Some school recreational facilities such as a high football stadium are under a joint

agreement between the City and the Turlock school districts. Planned neighborhood school parks are programmed at a size of eight acres each.

Community Parks. Community parks serve all ages and may include facilities for low-intensity/passive recreation use, lighted fields, courts, swimming pools, and areas and buildings for community festivals and civic events, as well as for organized sport and athletic competitions. Generally restrooms and some off-street parking are provided. While community parks serve larger areas of the City than do neighborhood-serving city parks, they may also meet the recreation/open space needs of the adjacent neighborhood. Ideally, community parks should be located along arterial streets, though a location along collector streets is also acceptable. Existing community parks range in size from 20.7 – 38.7 acres. Planned community parks are programmed in the 18 – 35 acre range.

STANDARDS

Park standards ensure that adequate open space for recreational use will be available as the City grows. The General Plan establishes distribution, size and service area standards for neighborhood and community parks. Standards for neighborhood school parks are subsumed within the neighborhood-serving city park category.

Distribution. The General Plan establishes a citywide standard of 4.2 acres of public parks per 1,000 residents and is based on the 1990 inventory of parkland. This is to be distributed as follows:

Neighborhood-Serving City Parks	2.8 acres per 1,000 residents
Community Parks	1.4 acres per 1,000 residents

Park Size. The following standards are established for all new parks:

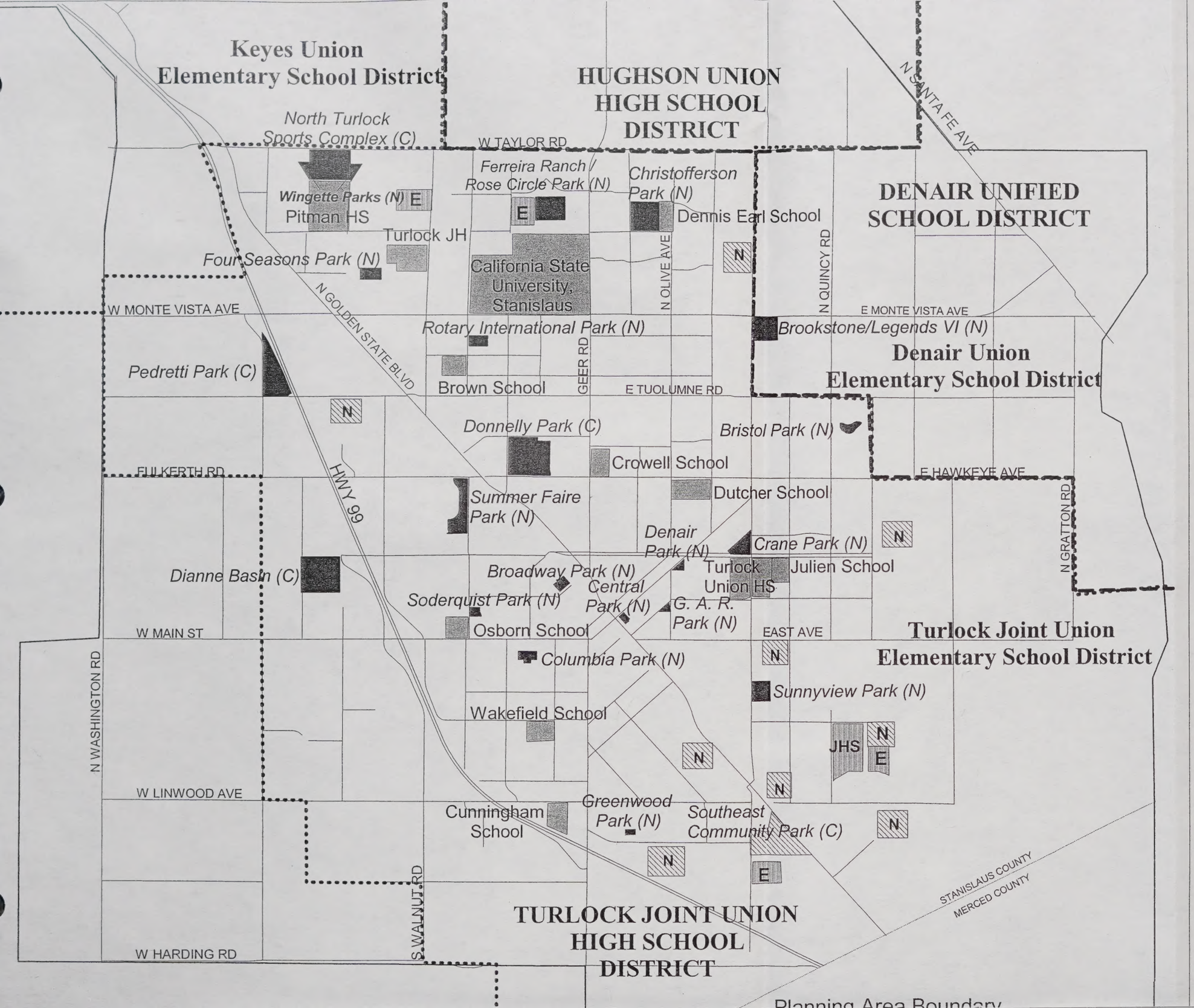
Neighborhood-Serving City Parks	3-8 acres
Community Park	18 acres or larger

Service Area. Service area is the territory within which recreational needs are served by a park.

Neighborhood-Serving City Parks	3/8 of a mile (approximately 2000 feet)
Community Parks	up to a 5 mile radius

Parks & Schools

Figure 4-1



Turlock General Plan

Updated January, 2002
City of Turlock, Planning Division

TABLE 4.1-A
PARK INVENTORY AS OF 1990, 2000 AND 2002

Park Classification[1]	Area in net acres, 1990	Area in net acres, 2000[3]	Area in net Acres, 2002[3]
COMMUNITY PARKS			
Donnelly	38.7	37.6	37.6
Pedretti	20.7	25.4	25.4
Diane (unimproved)		34.7	34.7
Turlock Regional Sports Complex (opened 2002)		--	31.8
TOTAL COMMUNITY PARKS	**59.4**	**97.7**	**129.5**
Acres/1,000 pop.[2]	**1.4**	**1.7**	**2.2**
NEIGHBORHOOD-SERVING CITY PARKS			
Soderquist	2.3	2.4	2.4
Broadway	1.8	1.8	1.8
Columbia	4.6	4.6	4.6
Sunnyview	10.1	9.8	9.8
Rotary International	5.0	5.0	5.0
Christoffersen	15.0	12.7	12.7
Bristol	4.0	4.0	4.0
Summerfaire	10.0	16.6	16.6
Central	0.5	0.5	0.5
Crane	7.7	7.0	7.0
G.A.R	0.2	0.2	0.2
Denair	0.7	0.8	0.8
Greenwood	0.3	0.3	0.3
Ferreira Ranch/Rose Circle (partially developed)		5.2	5.2
Four Seasons (partially developed)		2.2	4.3
Brookstone/Legends 6 (partially developed)		--	6.3
Two North Turlock Wingetts (unimproved)		--	6.2
SCHOOL PARKS			
Wakefield Elementary	4.0	4.0	4.0
Osborn Elementary	5.0	5.0	5.0
Cunningham Elementary	4.0	4.0	4.0
Brown Elementary	5.0	5.0	5.0
Crowell Elementary	6.0	6.0	6.0
Julien Elementary	5.0	5.0	5.0
Dutcher Elementary	6.0	6.0	6.0
Turlock High	10.0	10.0	10.0
CSUS	5.0	5.0	5.0
Dennis Earl Elementary	4.0	4.0	4.0
Turlock Junior High	8.0	8.0	8.0
Pitman High School (opened 2002)		20.0	20.0
TOTAL NEIGHBORHOOD PARKS	**124.2**	**155.1**	**169.7**
Acres/1,000 pop.	**2.8**	**2.8**	**2.8**
TOTAL PARK ACREAGE	**183.6**	**252.8**	**299.2**
Total acres/1,000 pop.	**4.2**	**4.5**	**5.0**

[1]Park Classification by Community Development Services Department.
[2]For a population of 43,893 - January 1991 and 59,367 - January 2002 population estimate for Turlock by the State Department of Finance and 55,810 by the 2000 Census (January 1, 2000).
[3]The acreage for the city parks were recalculated in 2002.
Source: Community Development Services Department, October 1994 and 2002 Note: Parkland area is based on acquisition date.

FUTURE NEED

Neighborhood-Serving City Parks and Community Parks. The need for future neighborhood-serving city parks (including school parks) and community parks is determined by applying distribution standards to the buildout population of 85,190 people (See Table 4.1–B). Deduction of existing facilities from the overall future need provides the additional net acreage needed; proposed neighborhood-serving city parks closely match this need while the table reflects that community park sites exceed the acreage needed based on the current standard of 4.2 acres/1,000 residents.

Acquisition of land at reasonable costs is an important aspect of a successful parkland program. Typically, not enough attention has been given by the City for parkland acquisition until an area is developing or developed and land prices have dramatically escalated.

A 32-acre regional sports complex adjoining Pitman High School ~~is~~ located in the northwest quadrant of the City was constructed and opened in 2002. A 35-acre community park site is planned in the southeast quadrant of the City. Nine new neighborhood-serving city parks and five neighborhood school parks are also planned. The size and location of the parks is reflected on Figure 4–1.

TABLE 4.1-B
PROVISION OF FUTURE PARKS FOR BUILDOUT POPULATION, 2002

	Neighborhood -Serving City Parks	Community Parks
Future Park Need at 2.8 acres/1,000 residents for each Neighborhood-Serving City Parks and 1.4 acres/1,000 for Community Parks	239	119
Existing (2002) Acreage	170	130
Net Acres Needed	69	0
Acreage Proposed	85	35

Note: Park acreage excludes proposed municipal golf course and linear recreation facilities along the canal right-of-way.

Source: City of Turlock Parks Master Plan, 1995 (updated 2002)

Golf Course. The National Recreation and Park Association recommends a nine-hole standard golf course for every 25,000 residents. The City's own studies confirm a present demand for at least one course. In 1987, the Activities and Facilities Commission completed a study of "The Need For A Municipal Golf Course In Turlock" which was accepted by the City

Council on January 26, 1988. The study evaluated the need for a golf course, specific facilities recommended to support a golf course, and methods for financing development. The study produced the following findings:

- There is currently an inadequate number of public and private golf facilities to support the existing recreational need in Stanislaus County.
- Growth in the region will further impact the availability of the existing golf facilities.
- The Turlock area does not have a low-cost, nearby, 18-hole golf course.
- A municipal golf course could be developed as a multi-use recreational facility to include storm drainage detention basins, softball/baseball complexes, tennis courts, playgrounds, swimming pools, meeting rooms and banquet facilities, and other compatible recreational uses.
- Approximately 180 to 200 acres will be needed to support an 18-hole golf course and ancillary facilities.
- Financing methods such as bonds, municipal/private joint ventures, and leaseback options are available to provide for development of a golf course.

The study concluded that an 18-hole municipal golf course is needed to serve the Turlock General Plan Area. The General Plan diagram does not propose any specific location for a golf course site, although a number of potential sites have been tentatively discussed. If planned appropriately, a large golf course site can be designed as part of a larger city park.

Guiding Policies

4.1-a Develop a high quality, diversified public park system that provides a variety of recreational opportunities for all City residents.

4.1-b Explore mechanisms to increase the per capita park acreage.

4.1-c Identify the needs of special user groups, such as the disabled and elderly, and address these in the design and development of park and recreation facilities.

4.1-d Minimize substitution of private recreation facilities for developer fee payment or park dedication to ensure that a public park system will be permanently available to the entire community.

4.1-e Review park standards periodically to ensure that needs are being met.

4.1-f Continue cooperative efforts with the Turlock school district through joint use agreements for park and recreational facilities. Locate new city parks in conjunction with elementary or junior high schools wherever feasible.

Although school parks are not available for public use at all times and do not contain complete park facilities, substantial cost savings justify shared use.

4.1-g Explore a more equitable distribution of the cost of improved park standards between existing and new residents, businesses, and property owners.

Implementing Policies

4.1-h Implement the objectives of the Park Master Plan, approved in 1995.

- Objective 1: Park System Development

  Develop a high-quality public park system with adequate space and facilities to provide an appropriate mix of recreation activities for the City's residents and work force.

- Objective 2: Recreation Programs

  Provide a range of leisure, recreational and cultural programs and facilities that are accessible and affordable to all segments of the community.

- Objective 3: Operations and Maintenance Programs

  Provide for a high quality of maintenance for all city parks, landscaped open space areas, and recreational facilities that enhance the visual attractiveness of Turlock while being as cost-effective as feasible.

- Objective 4: Open Space Greenway and Recreation Trail Protection Programs

  Establish methods to identify, acquire, develop and maintain important open space buffers and trail corridors throughout the community which offer leisure recreational facilities, protect the local environment, and enhance the community quality of life.

- Objective 5: Private Recreation Facilities

  The City shall promote the provision of private recreation facilities within large-scale private developments to meet a portion of the park and recreation impacts created by the development.

4.1- i Examine the present organizational arrangement of park and recreation facility management and maintenance to enhance these relationships including park planning, programming, design and facility acquisition to reflect the heightened importance of parks and recreation to the City.

Maintenance of all city-owned landscaped areas is administered by the Public Services Division of the Municipal Services Department. Recreation and Neighborhood Services Division of Turlock Police Services administer city-sponsored recreation programs.

4.1- j Provide 4.2 acres of public neighborhood-serving city parks (including neighborhood school parks) (2.8) and community parks (1.4) per 1,000 residents. This standard excludes detention basins used solely for drainage purposes and the proposed golf course, but includes parks jointly used by schools and the community.

4.1- k Calculate park fees to enable purchase of acreage and provision of off-site park improvements for 4.2 acres of parkland per 1,000 residents added and require payment of these fees and/or land deduction as a condition of all new residential development.

California Government Code Section 66477 (Quimby Act) allows the City to require dedication or payment of in-lieu fees sufficient to buy and provide off-site improvements for a maximum of 3 acres per 1,000 new residents; if the amount of existing parks exceed this

limit, then the existing amount, up to a maximum of 5 acres per 1,000 residents, may be adopted as the standard. Fees, even if updated annually, are rarely sufficient; the law authorizes appraisals at the time a final subdivision map is recorded.

Chapter 7 (Dedications and Reservations) and Chapter 13 (Park Fees of Title 11, Subdivisions) of the Turlock Municipal Code will be amended to reflect the new standard.

4.1-1 Undertake efforts to increase the existing standard for park acreage per 1,000 residents from 4.2 to 5.0. Update park standards and dedication requirements periodically to reflect the increased standard.

The City is unable to collect fees for the maximum park acreage permitted under State law because the acreage in 1992 does not meet that standard. An addition of approximately 34 acres to the existing (1992) park system is required to bring the City's park acreage to 5.0 acres per 1,000 residents; the additional acreage needed to meet the standard will increase with continued growth, The City should consider special one-time efforts to increase the existing park acreage. See also policy 4.1-r.

The Quimby Act requires that dedication of parkland or collection of park fees shall be benchmarked on the latest federal census. The 2000 parkland inventory show the city's park acreage to be 4.5 acres per 1,000 residents as reflected in Table 4.1-A. This establishes the basis for the City of Turlock to increase the existing standard for park acreage per 1,000 residents from 4.2 to 4.5 as well as adjusting the Public Facilities Fees for park development to the slightly higher standard.

4.1-m Consider levying a parks and recreation fee on nonresidential development commensurate with expected use of such facilities by employees of the non-residential developments.

Many California cities collect such fees. This funding mechanism can be used to provide recreation facilities in industrial areas.

4.1-n Where suitable land is available at acceptable cost, provide all residential areas with a neighborhood-serving city/community park (five or more acres where available).

Park locations have been selected to accommodate almost all new residences within a seven-minute walking distance of a park; a

majority are much closer. Provision of parking at neighborhood parks will not be necessary.

Neighborhood-serving city and Community Parks should generally not be smaller than the standards set forth earlier in this section. Small parks are expensive to maintain and are unable to adequately support the full range of desired facilities.

4.1- o Locate public parks in visible and accessible locations, in accordance with location criteria specified in Section 4.1.

Bristol Park, located along a winding local street, is not very accessible to residents other than its immediate neighbors, not fulfilling its designated function as a neighborhood-serving city park.

4.1- p Use available techniques to minimize acquisition costs.

The sale of land at prices below appraised market value ("bargain sale") to a non-profit land trust that re-sells to the City can provide tax savings to the seller.

4.1- q Acquire park sites promptly after collection of fees.

Delay in acquisition diminishes the purchasing power of available funds. Non-availability of maintenance funds should not be a reason to delay park acquisitions.

4.1- r Continue to study potential sites and opportunities to develop a public golf course at an appropriate location in order to meet this community need.

Given National Recreation and Park Association standards that call for a nine-hole golf course for every 25,000 residents, demand for at least one golf course is assured. Though there has been interest in developing a golf course for many years, the lack of start-up financing has prevented site acquisition.

Since the golf course will serve both future and present residents, the City could consider phased development of a city park that would include a golf course along with other recreation facilities. Provision of such a community-wide facility will improve the existing park acreage (see Policy 4.1-k); future development could be required to pay a fair share of expansion and improvements, subject to the maximum permitted by State law.

4.1- s Prepare and adopt a Parks, Recreation, and Open Space Master Plan.

Development of this Master Plan shall include analysis of the community value and desire regarding the present 50/50 split between neighborhood-serving city (including neighborhood school parks) and community parks including recreational uses and purposes of each. The Master Plan should also specify in greater detail park improvement standards and costs estimates, a facility prioritization plan, and a financing and acquisition schedule.

The Parks Master Plan, approved in 1995, changed the equal split between Neighborhood-Serving City (including neighborhood school parks) and Community acreage to 2.8 and 1.4 acres per 1,000 residents, respectfully.

4.1- t Examine the cost of ongoing maintenance of new neighborhood-serving city parks and explore alternative funding mechanisms to support their maintenance.

4.1- u Expand the involvement and opportunities of the Parks and Recreation Commission to facilitate the development and implementation of a Parks and Recreation Master Plan.

Placing a higher emphasis of the Parks and Recreation Commission into the park planning process can enhance citizen participation in the Parks Master Plan development and underscore the importance of the full range of park and recreation functions for the city.

The Parks Master Plan was adopted in 1995.

4.1- v In cooperation with the Turlock Irrigation District, develop a linear recreation corridor in the irrigation canal right-of-way along East Canal Drive.

The canal right-of-way is already being informally used by joggers and bicyclists. Formal recognition will permit improvements, such as removal of stray structures that presently block paths in some places. TID has expressed its willingness to work with the City in this undertaking.

A portion of the canal right-of-way in front of Turlock High School has been completed as a greenway. This greenway is known as the Joe Gallison Memorial Parkway.

4.1- w Continue joint school park usage agreement with the Turlock school districts.

4.1- x Consider establishment of regional parks in cooperation with Stanislaus County.

The County's Conservation/Open Space Element calls for provision of regional parks in areas where growth is anticipated.

4.1- y Ensure that adequate funds are available for maintenance of facilities.

If necessary, consider the establishment of a citywide maintenance district.

4.1- z Coordinate park planning and improvements with facilities for pedestrian and bicycle travel.

See Section 5.4, Transportation Element.

4.1-aa Support the efforts of the Parks and Recreation Commission and other city-associated recreation organizations to fund and develop new joint-use recreation facilities.

Through coordinated efforts with other recreation groups, including the Turlock Youth Soccer Association and the Turlock Little League, the city can expand opportunities for new recreational facilities.

4.2 EDUCATIONAL FACILITIES

Turlock's growing household size is partially a reflection of growth in the number of young families with children—the 25 to 44 and the 0 to 13 year age group segments grew faster than Turlock's total population during the 1980s and the 1990s. From 1980 to 2000, the percent increase between the age group 0 to 13 was 145 percent, the age group 25 to 44 increased by 120 percent, while the percent increase in total population was 112

percent.[1] Continued growth places added importance on sound planning for educational facilities. The General Plan workshops indicated residents' strong support for new schools to keep pace with growth; the 1990 Public Opinion Poll shows that two-thirds of the residents are willing to pay higher taxes for new schools. In November 1997, the community passed a $35 million General Obligation Bond Measure for the John H. Pitman High School. The General Obligation Bond will acquire the site, approximately 45-acres located at the northwest corner of Kilroy and Zeering Roads, and fund construction of a four-year comprehensive high school for 1,500 students with major structures to accommodate 2,000 students. Pitman High School is anticipated to be opened for classes in 2002.

ELEMENTARY AND SECONDARY SCHOOLS

School districts operate independently of local governmental control and regulatory mechanisms. Proposed school sites have to be referred to local agencies for comment, and all non-classroom facilities are subject to zoning and other land use control measures.

School Districts in the Planning Area. The Planning Area includes several school districts; three high school districts—Turlock Joint Union, Denair Unified, and Hughson Union High School—and five elementary school districts—Turlock Joint, Denair Union, Keyes Union, Hughson Union Elementary, and Chatom Union. (Because the Chatom district includes only industrial and agricultural land in the Planning Area, it is not discussed further here.) The majority of residents in the Planning Area are served by school districts in Turlock.

In addition to the public schools discussed here, there are three private elementary schools, two private junior high schools, and one private high school in Turlock.

TURLOCK SCHOOL DISTRICTS

The Turlock Joint Elementary School District provides for the elementary (K– 8 grades) school needs of the City. The Turlock Joint Union High School District (grades 9-12) serves Turlock and outlying unincorporated communities, including Keyes, Chatom and Mountain View. A small part of Turlock's northeast area, north of Tuolumne Road and east of Berkeley Avenue, is in the Denair Unified School Districts.

[1] 1980 age category populations: 6,047 and 7,325 persons respectively; 2000 age category populations: 13,998 and 16,103 persons respectively

Facilities and Enrollment. Enrollment from 1990 through 2000 has increased by 25.4 percent. (See Table 4.2–A.) The Joint Elementary School District in 1999 had a combined capacity of 6,377 students and a 1999 enrollment of 8,054 students; leaving a deficit of 1,677 students.[2] The Joint Union High School District had a capacity of 3,202 students in 1999 and a 1999 enrollment of 3,758; leaving a deficit of 556 students.[3] Six of the eight elementary schools in Turlock operate on a year-round basis, and 41 percent of all classrooms are portable.

TABLE 4.2-A
TURLOCK SCHOOL ENROLLMENT
1990-2000

	Turlock Joint Elementary School District			Turlock Joint Union High School District	Turlock School Districts
Year	**Grades K-6**	**7-8**	**SUBTOTALS**	**Grades 9-12**	**TOTALS**
1990	5,511	1,373	6,884	2,921	**9,805**
1991	5,695	1,432	7,127	3,087	**10,214**
1992	5,984	1,489	7,473	3,223	**10,696**
1993	6,053	1,601	7,654	3,342	**10,996**
1994	6,095	1,546	7,641	3,510	**11,151**
1995	6,031	1,585	7,616	3,581	**11,197**
1996	6,077	1,697	7,774	3,677	**11,451**
1997	6,232	1,632	7,864	3,658	**11,522**
1998	6,176	1,678	7,854	3,691	**11,545**
1999	6,304	1,750	8,054	3,758	**11,608**
2000	6,495	1,928	8,423	3,873	**12,296**

Source: Turlock Joint Unified School District

Projections and Future Plans. Based on the projected Plan buildout population for Turlock (85,190), a total of 18,274 students are expected to attend schools within the jurisdiction of Turlock school districts (See Table 4.2–B). A majority (56 percent) would be in elementary school.

[2] Turlock Joint Elementary School District, 2001
[3] Turlock Joint Union High School District, 2001

TABLE 4.2- B
TURLOCK SCHOOL ENROLLMENT PROJECTIONS AT GENERAL PLAN BUILDOUT, 2001

Grade	2000 enrollment	Additional Students[a]	Total[b]
Elementary (K-6)	6,495	3,546	**10,041**
Junior High (7-8)	1,928	912	**2,840**
High School (9-12)	3,873	1,520	**5,393**
Total	**12,296**	**5,976**	**18,274**
Population	55,810		85,190

[a]Average number of students per housing unit (0.35 for K-6th; 0.09 for 7th-8th; and 0.15 for 9th-12th) and 10,130 additional units projected in buildout base on 2.9 persons per housing unit.
[b]Adds 2000 enrollment with projected additional students.

The enrollment projections are based on students projected within the City of Turlock and not within the unincorporated area within the school districts. (This data will be updated when 2000 Census information is available.)

Source: Turlock School Districts, 2001

The Turlock school districts' standards for school capacity are as follows: elementary (800–1,000 students); junior high (1,200–1,500); and, high school (2,000–2,500). Depending on the school capacity assumed, 12–14 elementary schools will be needed to accommodate the projected buildout population. Figure 4–1 shows 12 elementary school sites. Two junior high schools and three high schools would be needed. All are shown on Figure 4–1.

School Funding. As of January 1987, State law allows school districts to levy development fees directly on new residential, commercial, and industrial development (Government Code Section 65995).

The passage of Proposition 1A on the November 1998 ballot triggered a substantial change in the way local agencies can mitigate school impacts. The Leroy F. Greene School Facilities Act of 1998 was enacted by SB 50 and funded through the $9.2 billion Proposition 1A bond approved by the voters. The Act includes funding for higher education facilities, K-12 facilitates, modernization of older schools, additional funding for districts in hardship situations and funding for class size reduction.

In 1998, the Governor signed Senate Bill 50 (SB 50) which imposed the most significant school facility finance and developer fee reform since the adoption of the 1986 School Facilities Act. The basic structure of the new law is as follows: a 50/50 state and local school facilities funding match, hardship funds for school districts that cannot achieve 50% locally, the ability for the school district to collect up to 50% from developers if the

district can meet the 50% match threshold, and the ability of school districts to collect up to 100% from the developers if the state fails to provide their 50% bond funding match.

In 2001, Turlock levied school fees on new residential development at the rate of $2.30 per square foot, and $0.33 per square foot for commercial and industrial development, the maximum permitted by State law. The above fees are termed Level II fees under the provisions of Senate Bill (SB) 50. The Turlock Joint Elementary School District qualifies to levy Level III fees of $3.94 under SB 50. Level III fees go into effect when the State determines that the State Bonds provided under SB 50 have been fully allocated and there are no more bond funds available to qualified school districts.

In addition to the use of developer fees that are applicable citywide, school districts may acquire funds to provide school services in specific areas through the creation of a Community Facilities or a Mello-Roos District. Such a district can be created with a two-thirds vote by area landowners, and may include a special tax and the sale of bonds to meet service costs.

A Mello-Roos District was established in Turlock in 1990 to pay for the impact of new development on schools in Turlock and the neighboring communities. The Mello-Roos fee and residential development fees for schools total $2.75 per square foot in 2001. This Mello-Roos District involves about 1,100 lots and nearly all the lots have been developed as of 2001. Besides State participation, development, and Mello-Roos fees to meet school-funding needs, the Turlock Joint Union High School District was successful in obtaining bond passage by voters in the community to pay for school facilities construction in November 1997.

DENAIR AND HUGHSON SCHOOL DISTRICTS

The Denair school districts operate three schools—elementary (grades K–4), middle (grades 5–8) and a high school (grades 9–12). There were 1,261 students enrolled in the three schools in 1998. The growth in enrollment between 1990 (1,202) and 1998 (1,261) was 59 students. Projected enrollment for the 1999-2000 school year, however, is expected to drop by 82 students to 1,179 total enrolled students. Only a small part of the Planning Area is within the jurisdiction of the Hughson school districts. The Turlock General Plan proposes no development for these areas.

CALIFORNIA STATE UNIVERSITY, STANISLAUS (CSUS)

A primarily commuter campus located at the north edge of the City, CSUS provides local opportunities for undergraduate, graduate and professional education, is a major employer, and offers cultural and recreational opportunities for the entire community. Like the City and the region, the University is expected to continue to grow throughout the planning period.

Facilities and Enrollment. CSUS was opened in temporary quarters in Turlock 1960 with a continuing mandate to serve six counties: Stanislaus, San Joaquin, Merced, Calaveras, Tuolumne, and Mariposa. The University moved to its permanent site in 1965. In addition to the Turlock campus, CSUS operates satellite campuses in Stockton and Merced and learning centers in Tracy and Sonora. The population of this service area is expected to increase by over 70% from 1.1 million in 1990 to 1.9 million in 2015. The campus Master Plan envisions an increase in students, faculty, and staff during the period, commensurate with the population increase. (See Table 4.2–C) From the 1990–91 school year to the 2015-2016 school year, a substantial increase in students (from 5,811 to 14,391 full and part time) is expected. Campus employment, in 2000 of about 430 faculty and 400 staff members, will also grow. Ultimate enrollment is projected to 12,000 full-time equivalent students (FTE), as compared with 5,611 FTE in 2000. CSUS staff indicate that ultimate buildout might be reached in 2017.

Land for facilities to serve an expanded student population is available on the present campus—much of the 220-acre site is undeveloped. While geographic expansion will not be necessary, an aggressive building program will be. The CSUS Master Plan describes future facilities, and the campus' five-year plan identifies projects to be undertaken in the near term. The major proposed projects are a 115,000 square foot replacement facility for the sciences, Science II, a major addition to the Library Building in concert with a renovation of the existing building, and major renovations of the Classroom Building and existing Science Building.

CSUS has undertaken a number of projects since the adoption of the General Plan in 1993 (California State University Stanislaus Public Works Project 1998)

- Demergasso-Bava Hall, a 98,000 square foot facility has 14 classrooms and labs and 162 faculty offices. The facility accommodates the School of Business and the School of Education, Mathematics, Computer Science, and Masters of Social Work.

Construction of the $21 million facility began in October 1996 and was completed in 1998.

- A $2.5 million campus perimeter roadways project was completed in 1998. The project consisted of construction of a landscaped and lighted campus interior road that will link all parking facilities and enhance access to all campus facilities.

- The Mary Stuart Rogers Gateway Center is a high priority for CSUS. The new 130,000 gross square foot facility is designed to accommodate educational support and all student service functions. The estimated total project budget is $27 million; construction began in December 1999 with occupancy expected in February 2002.

- A new 4,000 square foot recital and performance space is planned for 2002 at a total cost of $500,000. The new facility, the Bernell and Flora Snider Music Recital Hall was made possible through state minor capital outlay funds and a matching donation by the Snider Family.

TABLE 4.2- C
CALIFORNIA STATE UNIVERSITY, STANISLAUS
CURRENT AND PROJECTED ENROLLMENT, 1990-2016

Academic Year	Full and Part Time Students	Full Time Equivalent (FTE) Students	Percent Increase in FTE Students
1900-1991	5,811	4,179	--
1995-1996	5,972	4,635	10.9%
1998-1999	6,351	5,092	9.8%
2000-2001	7,062	5,611	10.2%
2005-2006	8,834	7,019	25.1%
2010-2011	11,276	8,959	27.6%
2015-2016	14,391	11,434	27.6%

Source: CSUS Department of Facilities Planning and Operations, April 2001.

Guiding Policies

4.2-a Consult with the school districts on policies and projects that affect the provision of educational facilities and services.

4.2-b Continue joint school/community park usage.

4.2-c Plan educational facilities with sufficient permanent capacity to meet the needs of current and projected future enrollment.

In 1998, two new schools opened their doors, Dennis Earl Elementary and the Freedom Alternative High School Site. Earl Elementary, located on North Olive Avenue and East Christoffersen Parkway, can support 720 students using class size reduction and a total year round enrollment estimated at 840. Freedom High School, located on East Canal Drive, is an independent study facility for students of Turlock Joint Union High School District. The facility consists of an office and instructional stations for independent study.

Also, in 1997 a General Obligation Bond was passed to fund the John H. Pitman High School, to be located at the northwest corner of Kilroy Road and West Christoffersen Parkway.

4.2-d Work cooperatively with CSUS to ensure compatibility of CSUS' growth objectives with policies and programs of the City and availability of adequate infrastructure to serve anticipated CSUS growth.

4.2-e Undertake efforts to promote a closer integration of the CSUS campus with the community.

Implementing Policies

Elementary and Secondary Schools

4.2-f Encourage the Turlock school districts to develop a comprehensive schools master plan as a means of providing greater detail on specific school sites, buildings, educational facilities, and funding mechanisms.

4.2-g Do not approve residential development in areas beyond the jurisdiction of Turlock school districts without consulting with the surrounding districts.

4.2-h Reserve school sites as shown on the General Plan Diagram.

4.2-i Continue present agreements with the Turlock school districts for joint usage of school parks for neighborhood recreation.

See also policies in Section 4.1.

4.2-j Only residential development requests which have recognized and fully mitigated any significant impacts on school facilities shall be approved. Where discretion is afforded to the City of Turlock, development projects shall be required to provide for, or finance the provision of, school facilities as determined to be needed to support the proposed development.

California State University—Stanislaus

4.2-k Establish land uses in the area surrounding CSUS compatible with the need and character of an academic campus.

The General Plan Diagram depicts a variety of land uses, including High Density Residential and some Community Commercial, in areas adjoining CSUS to encourage activity and campus support of commercial activities such as bookstores and cafes.

4.2-l Work with CSUS to encourage location of activities and facilities that will strengthen ties between the community and CSUS at the campus edge.

The design of the campus, with parking at the perimeter and academic activities in the center, serves to isolate the campus from the city.

4.2-m Confer with CSUS staff periodically to ensure the concurrence of City and CSUS plans and actions.

4.2-n Continue agreements with CSUS to maintain joint use of recreational facilities and make provisions to locate other mutually suitable recreational sites if existing facilities are no longer available due to CSUS growth.

4.2-o To reduce the traffic impacts of campus activities, encourage CSUS to provide campus access from Christofferson Road as well as from Monte Vista Avenue.

4.3 INFRASTRUCTURE (Non-transportation)

STORM DRAINAGE

Turlock's early drainage system consisted of storm sewers and pump stations that discharged primarily into Turlock Irrigation District (TID) Lateral No. 4 Drain. Growth brought about an increase in impervious surfaces and resultant runoff, and greater distances between new development and the Drain.

Existing drainage agreements allow the City to discharge storm water in laterals 3, 4 and 5 when capacity is available. Problems have occurred when the City has not been permitted to discharge the overflow because of high irrigation water levels in the laterals. The canals represent an unreliable outlet for the City's growing needs. Also, drainage agreements can be terminated by the TID at any time.

The 1988 Storm Drain Master Plan. To decrease dependence on the irrigation canals and unify Turlock's different storm drainage systems, the City adopted a comprehensive plan for storm drainage in 1988. It provides for the collection of all of the City's storm water to a storage basin on the west side of the Wastewater Treatment Facility. Existing sewer outfalls will be used to discharge the water into the San Joaquin River until a new parallel storm outfall is constructed.

Water will be directed to the Wastewater Treatment Facility through three major systems, identified by the streets in which the major trunk lines are located. Each system has sub-areas, many of which have planned or operating detention basins. Most detention basins will also be used as parks. A major portion of the work on the Christoffersen/Walnut and the Hawkeye systems has been completed. Little of the Linwood system has been constructed because of slow development in the area.

Recent Federal Clean Water Act amendments have provided for tighter controls by cities on the quality of storm water discharged into the nation's waterways. The City of Turlock will have to comply with these regulations by 2003. In essence, the regulations require some degree of treatment for all storm water discharges, and because of this the Turlock Master Plan, which provides for centralization and consolidation of all storm water flows at the wastewater plant, will better position the City to deal with the issue of treatment than cities with multiple, widely scattered discharge points.

WASTEWATER COLLECTION, TREATMENT AND DISPOSAL

The City provides wastewater treatment and disposal service to residential, commercial and industrial users in Turlock, to approximately 2,800 residents in Keyes and 3,000 in Denair Community Service districts. The treated effluent is discharged into the San Joaquin River via Turlock Irrigation District Lateral Drain #5.

Capacity and Usage. The wastewater treatment facility is currently designed for a hydraulic flow of 20.0 Million Gallons per Day (MGD). Average daily flow into the wastewater treatment facility during 2000 was 11.9 MGD. Industrial users have in use or reserve approximately 15% or 3 MGD of the current design hydraulic capacity.

In May of 1999, the City Council approved a sewer user fee increase of 9% per year for a three-year period. This user fee increase will become effective in July of 1999, 2000, and 2001. Revenue received by the fee increases will be used to fund debt service on a $14.0 million dollar bond issuance. This bond issuance is being used to fund an upgrade of the treatment facility in order to treat and remove ammonia from the City's wastewater discharge, land acquisition, and sewer system infrastructure improvements.

WATER SUPPLY AND DISTRIBUTION

Existing Supply. The City supplies domestic water to about 12,000 residential, industrial, and commercial connections within its corporate limits, and also to a rest-stop on Highway 99. The City of Modesto (formerly Del Este Water Company) provides supply to about 500 connections in the City. A few private wells also exist. Irrigation water in the Planning Area is provided by the Turlock Irrigation District (TID) and privately-operated wells.

Domestic water supply is currently derived from 23 deep groundwater wells that have a capacity to supply 45 mgd. The City does not chemically treat or chlorinate any water it supplies. Water consumption in Turlock has grown 14 percent over the last four years, and the system is operating at near-capacity levels during the hot summer months. Two new wells were added in 2001 with another well scheduled for completion by the summer of the year 2002. When completed, the 24th well will add an additional 2 mgd capacity.

There are three wells over 50 years old and an additional four wells over 40 years old. It is expected that at least half of these wells will need to be replaced within the next 10 years. Growth projections indicate an additional 10 to 15 wells must be constructed during this 10-year period.

The City has also been closely monitoring levels of PCE (perchloroethylene, a common dry cleaning solvent) found in the downtown area. A pilot treatment program using enhanced biodegradation is currently underway. In 1994, one well was found contaminated with EDB (Ethylene DiBromide, a grape fumigant). An Activated Carbon Filter System was installed and has proved very successful in removing this chemical. In the last two years, the level of the compound in this well has returned to non- detectable levels.

Conservation Efforts. Prompted by the last drought and previous water shortages, the City, in March 1991, passed a Water Conservation and Education Ordinance. The ordinance aims to accomplish conservation through restricting the times of outdoor residential water use. This program was quite successful in the latter stages of the drought. However, residential per capita water usage has increased dramatically since the end of the drought.

Guiding Policies

4.3-a Promote the orderly and efficient expansion of public utilities and the storm drainage system to adequately meet projected needs.

4.3-b Coordinate capital improvements planning for all municipal service infrastructure with the direction, extent, and timing of growth.

4.3-c Establish equitable methods for distributing costs associated with serving new development.

This policy has been implemented by development impact fee program.

4.3-d Address the inadequacy of the wastewater treatment facility to serve the anticipated growth.

Implementing Policies

Storm Drainage

4.3-e Continue implementation of the 1988 Storm Drain Master Plan.

4.3-f Develop new detention basins in places indicated on the Plan Diagram.

4.3-g Continue joint park/detention basin usage and development.

4.3-h Encourage the use of porous materials for outdoor spaces and require public work improvements to incorporate their use where feasible.

The increase in the amount of impervious surfaces such as concrete and asphalt is the prime reason for the increased runoff that accompanies urbanization. Compared to the spongy surfaces of a field, water in urban areas also runs off more rapidly, causing flooding and decreased replenishment of groundwater.

Alternatives to impervious pavement include porous asphalt, modular paving, gravel and porous bricks. Lattice concrete blocks with soils and grass in the interstices have also been successfully employed in many other cities.

4.3-i Require outdoor storm-water detention at project sites larger than two acres and consider using economic incentives to encourage projects to use porous surfaces and detain water at site.

Portions of parking lots, which include much of the open space in Turlock, can, for example, be designed to temporarily detain several inches of rainwater and release it gradually or allow it to percolate into the ground.

Detention basins designed as playing fields with gradually stepped or sloped edges providing seating can hold as much water as single-purpose basins.

4.3-j Require new construction sites to provide plans for erosion and sedimentation control from their sites during construction; establish guidelines for erosion control practices in Turlock

Wind and water-borne erosion from construction sites results in considerable maintenance cost and loss of efficiency to the City's storm drainage function, and control of this material at the source is the most cost effective way of dealing with it. State and federal regulations now require all cities to provide for erosion control in their ordinances and policies.

Wastewater Treatment

4.3-k Select and implement a plan to increase sewage treatment capacity.

The Wastewater Treatment Plant expansion completed in 1997 increased the plant capacity from 15.5 MGD to 20 MGD.

4.3-l Complete wastewater treatment facility upgrade in accordance with Regional Water Quality Control Board requirements.

The 1999 bond issuance will address an upgrade to the treatment facility to meet discharge requirements by December of 2003.

Water Supply and Distribution

4.3-m Continue comprehensive efforts to plan for orderly growth.

Several studies and plans are currently underway.

4.3-n Continue the City program of water system improvements to complement existing sewer system service capacities in the urban services area. Establish improvement priorities based on General Plan policies regarding the direction, extent, and timing or urbanization.

4.3-o Encourage water conservation measures in existing and new development, including flow restrictors and swimming pool covers.

4.3-p Support County programs to protect valuable groundwater resources.

See related Open Space and Conservation Element policies in Section 6.

4.3-q Investigate water rights issues associated with annexation of agricultural land to the City.

4.4 PUBLIC SAFETY SERVICES

The physical growth of a community has direct implications for many public facilities and services that the City provides to its residents. One of the most important of these services is the protection of public safety provided by the City's Police and Fire Prevention Departments. While public safety must be addressed in the General Plan's Safety Element, the City has chosen to include discussion of public safety services in this Element since police and fire buildings and major equipment are important public facilities. This section briefly describes existing service levels and facility inventories, and projects public safety facility needs in the future. Additional discussion can be found in the Safety Element.

Policies have been formulated to support the implementation of other General Plan land use development and community growth policies in a manner to ensure adequate levels of public safety facilities. These policies generally describe the City's goals for service levels, mitigating deficiencies, and meeting future Planning Area needs. The goals and policies are intended for use by local decision makers and facilities planners as guidelines for formulating capital improvement projects related to public safety facilities, equipment and annual budget appropriations.

POLICE SERVICES

Turlock Police Services operates from three principal buildings, with the Administration Building facility, located at 900 N. Palm Street, serving as the primary facility. Remodeled in 1999, the functions of Administration, Records, Communications, the Community Services Division and a newly constructed detention center all operate within a facility that formerly housed City Hall. Commonly referred to as the Administration Building, the remodeled facility serves as a customer reception center with a uniquely designed lobby that provides access to a broad range of services including recreation, neighborhood associations and youth services. Turlock Police Services is structured into three divisions: Operations, Administration and Community Services.

The Operations Division, which includes patrol, traffic enforcement, crime analysis, detectives, bicycle patrol, police chaplains, and communications, as well as the Critical Response Team operate from the remodeled Police building located at the corner of Palm and Starr. The remodeled building is now referred to as the Operations Building. While the Operations Building does not have public access, it serves as the primary building for the City's Emergency Operations Center, employee locker/shower rooms, physical fitness center, conference room and office space for supervisory and command staff.

The Investigations Bureau as part of the Operations Division, is housed in the newly remodeled Police Annex building, which is located at 301 Starr Avenue, adjacent to the Property and Evidence Building and across the street from the Operations Building. The Investigations building includes a small laboratory equipped with the necessary ventilation systems to provide for employee safety while testing narcotics and other evidentiary items that may prove hazardous to employees. In addition to office space, the building includes reception area and interview rooms.

The Administration Division contains police records, secretarial services and property/evidence control. Administration Division also provides oversight for the Office of Professional Standards and Conduct (internal affairs, employee background and special investigations, public affairs and business services). Implementation of new technology has been a top priority for Administration Division during the past two years. A significant amount of participative efforts resulted in the purchase and installation of a new 800 megahertz, computerized, trunked radio communications system that is state of the art. Additionally, a new computer-aided dispatch (CAD) system and police records management (RMS) system have been purchased to replace former RMS and CAD systems, which are outdated systems, not user friendly or compatible environments nor compliant for the year 2000. While such an effort comes with significant expense, the new systems will increase efficiency and enhance response times for police and fire services.

The Community Services Division consists of recreation services, sports and aquatic programs, facility reservations, neighborhood services, including code enforcement, drug suppression officer, school resource officer, neighborhood associations, the Arts Commission Coordinator, animal control, prevention services, youth diversion and the Police Activities League (PAL). In addition, the Community Services Division works closely with many service agencies and schools to provide comprehensive crime prevention information to community residents. While many of the programs offered by Community Services are year-

round activities, others are seasonal, such as the aquatics programs. Community Services may have as many as 80 part-time staff providing services and programs to the community. The staff range in age from high school employees to senior citizens.

The newly remodeled facilities serving Police Services should be sufficient to provide adequate spatial needs through 2006. Additional spatial needs will be accomplished by implementing the "bridging building" concept, which requires new construction of a two story building that will tie the existing Administration and Operations buildings together. Completion of the "bridging building" will provide space for the re-integration of Property/Evidence operations and Investigations with Administration Operations, thus a return to a centralized point for external and internal customers service. Unfortunately, Police Services has remained physically separated since the initial separation of Police Records to a separate building in 1984.

It is important to comment on the status of Animal Services. Currently, the primary building for Animal Services is located on South Walnut Road. The operation continues to remain in a facility that was constructed in the mid-1960's and is critically in need of major expansion. As the City's population has increased, so has the need for animal services. In addition, recent legislation mandating extended sheltering and care of animals further exacerbates the critical problem of overcrowding.

The General Plan process in 1992 demonstrated City officials, citizens and police command staff members were anxious to commence application of the Community Oriented Policing philosophy, which was formally implemented during 1993. The Community Policing philosophy promotes and supports organizational strategies to address the causes and reduce the fear of crime and social disorder through community partnerships and problem solving tactics. A fundamental shift from traditional, reactive policing, community policing stresses the prevention of crime before it occurs through developing partnerships and empowering the community to take ownership for their public safety.

Community policing is an integral part of combating crime and improving the quality of life in our community. The purpose of Turlock Police Services is fulfilled through the commitment of forming pro-active and creative community partnerships that develop responsible ownership for public safety in Turlock. This commitment is accomplished through:

- Educating the public in how they can improve their personal safety;
- Using a pro-active and preventative approach that is issue oriented;

- Supporting innovative approaches in problem-solving;
- Establishing mutual trust and communication among ourselves and the community;
- Providing positive role models and values through our activities in the neighborhoods and community as a whole;
- Utilizing an ongoing evaluative and flexible approach to community safety; and
- Professional service and equitable application of the law.

Providing high level police protection to the citizens of Turlock has historically been a primary objective of City officials. In September 1992, the authorized sworn strength of Turlock Police was 56 police officers, or 1.16 full time police officers per 1,000 population. As a result of federal assistance in hiring police officers, the presently authorized sworn strength is 63 police officers. At a population of 57,756 in 2001, the police officer per 1,000 population ratio is 1.09, thus slightly lower than 1992. However, it is significant to note the 1.09 ratio remains far short of the desired 1.5 police officers per 1,000 population and significantly falls behind a national average of more than 2 police officers per 1,000 population.

While the provision of high level police protection for the citizens of Turlock has been a primary objective of City officials, the continued growth of Turlock has created a gradual decline in the level of police services. In the early part of 1996, Turlock Police Services presented to City Council a conceptual model of prioritized services, in an effort to provide consistency in responding to calls for service, and in light of the continued shortage of general fund revenues needed to hire additional police officers and police support staff.

Re-assessing demands for service and identifying the priorities of those services, Turlock Police Services established a conceptual framework which defines policing as a whole for the City of Turlock. The conceptual framework can be utilized by all persons - both within and outside the organization - to ensure that a full range of essential activities continue to be provided. In order to achieve the proper balance of services for the community, police command staff identified three categories of service, commonly referred to as the Musts, Shoulds and Desireds.

The first category, the "must" level, represents those activities and services that Turlock Police Services must do; traditionally, it is reactive policing. However simply stated, reactive policing suffers in effectiveness because it rarely has any long-term impact on underlying problems. These identified services are better defined as those of immediate public safety

needs. In order to avoid confusion and ambiguity, public safety is the protection against immediate threat to life and/or property. Mandated report requirements also fall within this category, such as domestic violence, elder/child abuse, missing persons, etc.

The second category, the "should" level, represents those activities which Turlock Police Services should be doing. This level includes planned efforts that are focused on reducing crime and disorder. It is usually a planned reaction to a series of activities, such as a task force or directed enforcement. And while this level of service can provide for a longer impact on reducing crime, any success is limited to displacement only. The should category provides for direct law enforcement issues that are not immediately threatening or mandated by statute; where there is a crime with an identifiable suspect (or a good chance of developing one - solvability factor) and apprehension/prosecution is desired, mandated or necessary (depending on the crime and situation).

The third category, the "desired" level, represents the service members of Turlock Police Services desire to provide our community. Activities within this category are actually preventative by nature and are most effective in partnerships with others. These desired activities are not "quick fix" reactions to problems, but rather require commitments for future investments in the quality of life for our community. Desired services are not necessarily those services that do not fit the above two categories. While it is the desire of Turlock Police Services to assist our community in the documentation of crimes which do not meet the criteria of the above two categories, it is important to understand the purpose of this category is to direct activity towards focusing on the factors contributing towards the conditions which have potential for creating negative behavior. The intention here is to improve the state of stability over a period of time.

The challenge of categorizing services was not an easy task for the three divisions that make up Turlock Police Services, particularly for patrol and emergency communications. While each division provides considerable variation in the spectrum of service delivery, the hostile and violent environment in which police officers and dispatchers are subjected to is most difficult to prioritize. Further complicating the work dynamic is the expectation of a 7/24 response - service seven days per week and 24 hours per day.

While the challenge of prioritizing services remains a difficult task, the unique structure and organizational blend of Turlock Police Services

enables a dynamic opportunity for providing enhanced public safety and increased livability to the community.

FIRE PREVENTION AND PROTECTION

The Turlock City Emergency Services operates from four facilities. These facilities include: Station No. 1 located at Minaret near Hamilton; Station No. 2 located on Walnut Avenue near Highway 99; Station No. 3 located on Monte Vista Avenue near Radcliffe; and, Station No. 4 located on North Walnut near Monte Vista. Of the four facilities, Station No. 1 was constructed in early 1950 and it may have outlived its usefulness as a central Fire Department facility. The Turlock Fire Department has a total of six fire engines, and one multi rescue vehicle.

In recent years the Fire Department has expanded its role from one of strictly fire suppression responsibilities to a proactive intervention in situations that threaten or are likely to threaten the health, safety, or property of Turlock citizens because of fire, trauma, sudden illness, or disaster. In addition to typical fire suppression services, the department personnel provide other services including arson investigation, hazardous material response, emergency medical response, confined space rescue, CPR training, public education, and building inspection. Total calls for service totaled 3,000 in 2000. The single highest increase in service demand is in the area of emergency medical aid response. There were 2,175 "EMS" (emergency medical service) calls in 2000, totaling 73% of all Turlock Fire Services calls in 2000.

The fire department in recent years has successfully flattened the organization, thus reducing management staff. The department is lead by a Fire Chief, along with three divisional chiefs. One Division Chief directs Fire Suppression Personnel, another Division Chief coordinates life safety and the activities of the Fire Inspector, and a third Division Chief that organizes training and manages department documentation. All fire stations also house suppression equipment and 24-hour fire personnel. Station staffing includes one Captain and an engineer for possible 11 personnel per shift. Each shift has a shift supervisor that coordinates activities for their personnel. Support staff include a full time administrative assistant and part time clerical support, located at City Hall. The Fire Department, as well as, citizens of Turlock benefit greatly through the support of a highly respected Reserve Division made up of concerned and trained citizens of the community. They support the activities of our full time paid division and are a tremendous asset that provides round-the-clock service.

Response time "Level of service" standards relating to fire protection services are generally compared to national trends as reported by the National Fire Protection Agency. Turlock's Fire Department has historically met or exceeded these standards, generally on an equivalent level with other cities in the western States. Turlock City Fire and Emergency Services has worked diligently in meeting with the national standards while being prudent stewards of precious funds. For example, the department successfully maintains a 5-minute or less response time. The outward expansion of urban development, however, is "stretching" this response time to maximum acceptable limits.

Facility planning efforts for a future fire facility are necessary to accommodate future growth within the city limits. As discussed above, there were questions if Station No. 1 had outlived its usefulness as a central facility. In 2001, an extensive site study concluded that Station No. 1 is in an optimum location for service distribution. Consequently, the City of Turlock is considering a plan to remodel the station within a five-year period. As with any future public facility needs, the fire department is dependent upon the level of revenue that the city receives and the annual appropriations in Capital improvement programs.

Guiding Policies

4.4-a Maintain the commitment to provide a level of service standard that meets or exceeds the national average in response to police protection and fire protection/prevention through efficient organization, administration and annual funding.

4.4-b Continue to promote the orderly and efficient expansion of public safety facilities to adequately meet the needs of the community while minimizing adverse fiscal and environmental impacts.

4.4-c Continue to coordinate capital improvements planning for public safety facility needs with implementing policies set forth in this Plan with respect to the direction, extent, and timing of Turlock's growth.

4.4-d Establish and review existing equitable methods for minimizing public facility and service costs associated with new development.

4.4-e Maintain the commitment to the Community Oriented Policing philosophy implemented in 1993.

Implementing Policies

Police Service

4.4-f Continue to monitor and revamp as necessary the Police Department's beat system to provide a high quality and more efficient crime deterrent service with a minimal response time.

4.4-g Continue and encourage existing community crime prevention programs such as Neighborhood Watch, PAL, DARE, and gang awareness, to help deter crime throughout the City.

4.4-h Implement the Community Oriented Policing Program through cooperative staff efforts and necessary funding.

4.4-i Form pro-active and creative community partnerships that develop responsible ownership for public safety in Turlock. This policy is accomplished as follows:

- Educate the public in how they can improve their personal safety.
- Use a pro-active and preventative approach that is issue oriented.
- Support innovative approaches in problem-solving.
- Establish mutual trust and communication among Police Services staff and the community.
- Provide positive role models and values through activities in the neighborhoods and community as a whole.
- Utilize an ongoing evaluative and flexible approach to community safety.
- Apply professional service and equitable application of the law.

Fire Service

4.4-j Adequately distribute fire fighting equipment and personnel throughout the Sphere of Influence to ensure quick response time (5 minutes to all calls within the primary service area of each fire station).

4.4-k New fire station sites, including the proposed central public safety facility, should be selected and dedicated with new development based on the configuration and phasing of new development and

urban expansion. Ease of access and efficient service areas should be major determinants.

4.4-l Do not allow building construction in the Sphere of Influence which is beyond the five (5) minute response time from any fire station.

4.4-m Continue to monitor water fire-flow capability throughout the City and improve water availability if any locations have flows considered inadequate for fire protection.

Combined Public Services

4.4-n Complete site selection process and undertake site and architectural design steps to move forward with construction of the new public safety facility.

Remodeled in 1999, the Police Services Division moved to the former City Hall building located at 900 North Palm. Administration, records, communications, the Community Services Division and the detention center are all located at this facility.

4.4-o Undertake a reexamination of the present Capital Facilities Fees schedule to reflect the changes in Public Safety facility needs identified in this Plan.

4.4-p Continue analysis of the fiscal impacts on public service levels caused by new annexations of territory to the City limits, thereby expanding existing beats and response needs.

Section 5
Transportation Element

Turlock benefits from good freeway access and links to other places in the Central Valley and to the Bay Area. Many of the outdoor recreation opportunities afforded by the Sierra are less than an hour away. The City's location and transportation connections make it an attractive place for residents and businesses. The relatively easy long-distance commutes, together with comparatively low housing costs, explain some of the growth the City experienced during the 1980s and 1990s.

Efficient regional connections are important to the continued development of the City and vital to many residents as well; over 40 percent of the City's employed residents in 1990 commuted to a destination outside the City (Table 5–A). About 71 percent of the commuters (29 percent of the total employed residents) worked at other places within Stanislaus County, principally in Modesto. Mean travel time to work was 19 minutes in 1990. (The 2000 census data was not available as of August of 2001. This data will be updated when the information is available.)

Traffic conditions within the City are generally good. Residents can travel across town by automobile in less than ten minutes. Delays, when they happen, are isolated and of short durations. Maintenance of this high level of mobility is a stated priority of Turlock's residents and a goal of the General Plan as well.

TABLE 5–A
TURLOCK EMPLOYED RESIDENTS' COMMUTING PATTERNS, 1990

Place of Work	Persons	Percent
Turlock	10,257	57.5
Other Stanislaus County	5,078	28.5
Outside Stanislaus County	2,114	11.9
Out of State	7	0.0
Not Reported	372	2.1
Total	**17,828**	**100.0**

Source: 1990 U.S. Census. **(This table will be updated when the 2000 Census data is available.)**

The Transportation Element provides a framework to guide the growth of Turlock's transportation-related infrastructure over the next 20 years. Also included in the Element are policies to enhance the efficiency of the existing circulation system. The promotion of the use of alternative modes of transportation, including transit, walking and bicycle use, is a major emphasis of the Plan. The Element is closely integrated with the Land Use Element to ensure the adequacy of the planned street network to serve future development.

5.1 STANDARDS FOR TRAFFIC SERVICE

In many of the developed parts of Turlock, the primary traffic issues are the feasibility of improvements and achievement of an acceptable level of service. In a few of these areas, such as along Geer Road, maintenance of acceptable service standards would place severe limits on allowable intensities or access conditions for new developments. Development in new areas is less constrained by service standards since adequate rights-of-way can be provided.

Level of service (LOS) is a qualitative measure of traffic service along a roadway or at an intersection. As described in Table 5.1–A, it ranges from A to F, with LOS A being best and LOS F being worst. LOS A, B and C indicate conditions where traffic can move relatively freely. LOS D describes conditions where delay is more noticeable and average travel speeds are as low as 40 percent of the free flow speed. LOS E indicates significant delays and average travel speeds of one-third the free flow speed or lower; traffic volumes are generally at or close to capacity. Finally, LOS F characterizes arterial flow at very slow speeds (stop-and-go), and large delays (more than one minute) with queuing at signalized intersections; in effect, traffic demand on the roadway exceeds the roadway's capacity.

TABLE 5.1–A
LEVEL OF SERVICE DEFINITIONS, 2001

Level of Service	Traffic Flow Conditions	Volume to Capacity Ratio
A	Conditions of free flow; drivers' desires, stipulated speed limits, or physical roadway conditions control speed.	0 to 0.59
B	Conditions of stable flow; operating speeds beginning to be restricted; little or no restrictions on maneuverability from other vehicles.	0.60 to 0.69
C	Conditions of stable flow; speeds and maneuverability more closely restricted; occasional backups behind left-turning vehicles at intersections.	0.70 to 0.79
D	Conditions approach unstable flow; tolerable speeds can be maintained but temporary restrictions may cause extensive delays; little freedom to maneuver; comfort and convenience low; at intersection, some motorists, especially those making left turns, may wait through one or more signal changes.	0.80 to 0.89
E	Conditions approach capacity; unstable flow with stoppages of momentary duration; maneuverability severely limited.	0.90 to 0.99
F	Forced flow conditions; stoppages for long periods; low operating speeds.	1.00 +

Sources: Dowling Associates; Blayney Dyett Greenberg.

TRAFFIC ANALYSIS

In order to confirm the need for the traffic facilities identified in the Transportation Element, a forecast of traffic was made that included buildout of General Plan land use as well as an upgrade of the transportation facilities to reflect the system shown in the Transportation Element and on the General Plan Diagram. The forecast was made using the 1990 version of the Stanislaus Council of Governments (StanCOG) traffic-forecasting model. The forecast included StanCOG estimates of land use in the year 2010 in all parts of the County outside of the Planning Area. In the Planning Area, land use is based on General Plan designations. The model was used to produce forecasts of Average Daily Traffic on the freeways, arterials and many of the collector streets in the City.

An analysis of service levels on the freeways, arterials and collectors was prepared using the forecast; the projected volumes and service levels are contained in the General Plan EIR. In brief, the forecast indicates that most facilities will operate at service level C or better; the major exceptions are Geer Road and Lander Avenue, which may operate at LOS E or F during peak periods.

Guiding Policies

5.1-a Adopt Level of Service standards to be used in evaluating development proposals and capital improvements.

5.1-b Maintain acceptable service standards for all major streets and intersections.

Implementing Policies

5.1-c Strive to maintain LOS C for all freeways and expressways.

Level of Service shall be evaluated on the basis of either the Highway Capacity Manual, or other means approved by the City's Engineering Division of Municipal Services.

5.1-d Approve LOS D as an allowable standard for arterial and collector streets where existing conditions limit improvements.

The traffic forecast indicates that the following street segments may operate at Service Level D upon buildout of the General Plan:

Monte Vista Avenue between SR 99 and Walnut Avenue; Hawkeye Avenue between SR 99 and Golden State Boulevard; and SR 99 between Main Street and Monte Vista Avenue.

5.1-e Recognize that the City's land use pattern, the limited number of continuous north-south streets, and the concentration of activity on the east side of the freeway will result in very poor service levels on a small number of streets where capacity cannot be increased because it would create unacceptable disruption.

The following locations are projected to operate at LOS E or F at General Plan buildout: Geer Road between Canal Drive and Tuolumne Road; Lander Avenue between Main Street and Linwood Avenue; Main Street between West Avenue and Lander Avenue; and Olive Avenue between Main Street and Canal Drive.

5.1-f On streets where poor service levels are anticipated, investigate and implement improvement projects which will improve traffic operations. To reduce demand at congested intersections on Geer Road and Lander Avenue, new development projects will be required to provide auto access from side streets wherever possible.

Measures such as parking prohibitions, turn prohibitions and minor widening will be evaluated on streets where existing development makes major widening projects unacceptable.

5.1-g Continue to identify streets and intersections with unacceptable levels of service and implement a program to upgrade them.

5.1-h Design roadway improvements and evaluate development projects using suggested LOS criteria prescribed in policies 5.1-c, 5.1-d, and 5.1-e.

For projects along the State Highway System, Project Study Reports will be a necessary element of any traffic analysis report when required as part of an environmental review analysis by the City of Turlock.

5.1-i Continue to monitor traffic service levels and implement Circulation Element improvements prior to deterioration in levels of service to below the stated standard.

Development approvals should require demonstration that traffic improvements necessary to serve the development without isolating

the standard will be in place to accommodate trips generated by the project.

5.2 STREET NETWORK, CLASSIFICATION, AND AUTOMOBILE CIRCULATION

A hierarchy of adequately sized streets will be required to provide access to future development and maintain acceptable levels of service. The circulation network in the General Plan Diagram identifies the functional classifications of key routes. Figure 5–1 distinguishes these as existing or proposed alignments. A route's design, including the number of lanes needed, is determined both by its classification as well as the projected traffic level on the street. The classifications, and their required development and access standards, are identified in Table 5.2–A.

All freeways identified in the Transportation Element are intended to have three lanes in each direction; all arterials and expressways are intended to have two lanes in each direction plus a turn median. While additional width is possible for each of these classifications, the traffic analysis indicates that the service level standards can be satisfied with these cross-sections.

Circulation System

Figure 5-1

Freeway
Expressway
Arterial
4-lane Collector
2-lane Collector

Future Streets

Interchange
Future Interchange

N

0 4000 8000 Feet

Turlock
General Plan

City of Turlock, Planning Division
Updated January, 2002

TABLE 5.2-A
STREET CLASSIFICATIONS, 2001

Street Type	Function	Access	Right-of-Way	Discussion
Freeway	Provides for intra- and inter-regional mobility.	Restricted to primary arterials via interchanges.	Varies.	State route 99 is the only Freeway in the Planning Area.
Expressways	Provide for movement of through-traffic.	Limited access to abutting properties; varies according to classification.	Varies according to classification from 100 to 110 foot right-of-way.	See Table 5.2-B for greater breakdown by class.
Arterials	Collect and distribute traffic from freeways and expressways to collector streets, and vice versa.	Optimum distance between intersections is approximately ¼ mile. Driveways to major traffic generators may be permitted within the ¼ mile spacing; other intersections closer than ¼ mile are restricted to right turn access, unless other access policies are in place as of 1992.	In developing areas of the City, major arterials will be constructed within 100-110 foot rights-of-way and will carry two-three lanes of traffic in each direction, and provide for a left turn median.	Arterials ideally are spaced at one-mile intervals, though expressways in the one-mile grid can serve the same function. As shown in Figure 5-1, the City has designated some streets on the one-mile grid as major collectors rather than arterials.
Major Collectors	Serve as connectors between local and arterial streets and provide direct access to parcels.	At major intersections, driveways on collector streets should be no closer than 50 feet to the intersection. Non-residential driveways and/or intersecting streets or collector streets should be no closer than 300-400 feet apart.	Major collectors carry four lanes of traffic within an 84 foot right-of-way. Major collectors carry four lanes of traffic and two bicycle lanes within a 94 foot right-of-way.	Industrial Collector right-of-way width 76 feet.
Minor Collectors	Similar to major collectors, but streets have lower volumes.	Same as major collectors.	Two lanes of traffic within a 60-foot right-of-way. Two lanes of traffic with bicycle lanes within a 70-foot right-of-way.	
Local Streets	Provides access to parcels.	Access is not restricted.	Two lanes with 50- or 54-foot rights-of-way.	Local streets constitute the largest part of the City's circulation system. See Table 7.4-A for maximum spacing between local through streets.

Sources: Dowling Associates; Blayney Dyett Greenberg.

CONSISTENCY WITH REGIONAL PROGRAMS

Plan policies are coordinated with regional programs and needs. The planned expressways represent a joint attempt by Stanislaus County and Turlock to provide for intermediate capacity (in between freeways and arterials) facilities that can accommodate significant portions of the inter-regional travel in the future. Improving Highway 99 interchanges throughout the City would improve Turlock's accessibility to the regional network. Design and access standards for expressways, as adopted StanCOG, are summarized in Table 5.2–B. An amendment to the Expressway Study was initiated in 1999, and formally adopted into the 2001 Regional Transportation Plan in February 2002. The amended Expressway Study includes an inventory of each expressway segment and evaluation of current conditions. The amendments to the Turlock Planning Area expressway system includes deleting Waring/Verduga corridor and Taylor Road, and adding Christoffersen Parkway. All expressways in the Planning Area are classified as Class C.

TABLE 5.2-B
EXPRESSWAY DESIGN AND ACCESS STANDARDS

Classification	Access Standards	Design Speeds (Miles per hour)
Class A	Access to/from driveways and minor streets prohibited. Interchanges at major cross streets.	Mainline: 50-55 mph
Class B	Restricted access from driveways and minor streets. No interchanges. Major cross streets are signalized and the expressway receives 65-67 percent of the signal's green time.	45-50 mph
Class C	Minor access restrictions. Left turns to/from occasional collector streets allowed. At signalized intersections, the expressway will receive 55-65 percent of the signal's green time.	45-50 mph

Source: Adapted from *StanCOG*, 1990

Coordination of the Plan with the County Congestion Management Program is discussed in the next section.

CONSISTENCY WITH THE CAPITAL IMPROVEMENT PROGRAM

The Plan includes proposals for a number of new streets and improvements to many others. Projects identified in the Plan will need to be prioritized and included in the City's ongoing Capital Facilities Fee (CFF) Improvement Program. Modifications to the CFF and its implementation program are to be made as a normal part of the City's budgeting and implementation process and do not require amendment of the General Plan.

Guiding Policies

5.2-a Promote safe and efficient vehicular movement.

5.2-b Use Figure 5–1: Circulation System, and Table 5.2-C, Major Circulation Improvements, to identify, schedule, and implement roadway improvements as development occurs in the future; evaluate future development and roadway improvement plans against standards for the classifications as set forth in Table 5.2–A.

5.2-c Make efficient use of existing transportation facilities.

5.2-d Coordinate local actions with State and County agencies to ensure consistency between local and regional actions including but not limited to the Regional Transportation Plan, Regional Expressway Study, Regional Transit Plan, and Regional Bicycle Action Plan.

5.2-e Through layout of land uses, improved alternate modes, and provision of more direct routes, strive to reduce the total vehicle miles traveled.

See also sections 5.3 and 5.4, and Section 7: City Design Element.

5.2-f Continue to review the distribution of the cost of street and other traffic improvements between existing and new development, and residents and businesses based on impacts on service levels.

TABLE 5.2-C
MAJOR CIRCULATION IMPROVEMENTS, 2002

1	Improve Taylor Road between Washington and Golden State Boulevard to four-lane expressway status. Improve Taylor Road between Golden State Boulevard and Berkeley Avenue to a two-lane collector.
2	Improve Christoffersen Parkway between Golden State Boulevard and Berkeley Avenue to four-lane expressway status.
3	Improve Verduga Road/Waring Road as two-lane collector between Christoffersen Parkway and SR 99. (An amendment to the Expressway Study was initiated in 1999, and formally adopted into the 2001 Regional Transportation Plan in February 2002. The amendments to the Turlock Planning Area expressway system includes deleting Waring/Verduga corridor and Taylor Road, and adding Christoffersen Parkway.)
4	Improve Monte Vista Avenue between Tegner Road and Del's Lane and from approximately 300 feet west of Colorado Avenue to Berkeley Road to four-lane arterial status.
5	Widen Fulkerth Road between Tegner Road and Tully Road as a four-lane arterial. Project has been completed between Tully Road and Diane Drive.
6	Improve Main Street between Tegner Road and SR 99 to four-lane arterial status.
7	Develop minimum impact design and implement four-lane section for Main Street between West Avenue and Olive Avenue.
8	Develop one-way couplet of Minerva Street and East Avenue between Golden State Boulevard and Minaret Street as traffic volumes warrant.
9	Improve East Avenue to four-lane arterial status between Minaret Avenue and Johnson Road; develop minimum impact design through existing developed area as appropriate.
10	Extend Daubenberger Road as two-lane collector from Brier Road to Golden State Boulevard.
11	Improve and extend Olive Avenue from Canal Drive to Springer Drive to a four-lane arterial. Improve Olive Avenue north of Springer Drive to Taylor Road to a two-lane collector street.
12	Improve Walnut Road between Monte Vista Avenue and Taylor Road to four-lane arterial status.
13	Improve Tegner Road between Main Street and Monte Vista Avenue to two-lane Industrial collector status with bicycle lanes.
14	Develop new segment of Tuolumne Road between Walnut Road and Golden State Boulevard as four-lane collector. Completed as a 2-lane collector with bike lanes.

15	Complete Tully Road as two-lane collector between Fulkerth Road and Tuolumne Road in conjunction with new development. Project has been completed.
16	Connect Linwood Avenue across Golden State Boulevard; close existing Golf Road crossing of Golden State; close Palmer Road at Linwood Avenue; extend Johnson Road from Linwood Avenue to Palmer Road.
17	Develop Tuolumne Road from Golden State Boulevard to terminus near SR 99 as four-lane collector street in conjunction with new development.
18	Create new east-west two-lane collector with bicycle lanes, Springer Drive, between Pitman High School and Berkeley Road.
19	Extend Quincy Road as two-lane collector from East Avenue to Brier Road in conjunction with new development.
20	Extend Johnson Road north to Tuolumne Road in conjunction with new development. Project has been completed.
21	Extend Fosberg Road to Taylor Road as two-lane collector in conjunction with new development. Project has been completed.
22	Extend McKenna Drive from Taylor Road to Christoffersen Parkway as two-lane collector in conjunction with new development.
23	Extend Kilroy Road to Taylor Road as two-lane collector with bicycle lanes in conjunction with new development.
24	Install signal at Monte Vista Avenue and Golden State Boulevard. Project has been completed.
25	Install signal at Tuolumne Road and Golden State Boulevard.
26	Construct an east/west industrial collector street between Kilroy and Walnut just north of the City corporation yard.
27	Improve the State Route 99/State Route 165 (Lander Avenue) interchange. Support the implementation of regional transportation improvement at the State Route 99/State Route 165 interchange consistent with the 2001 Regional Transportation Plan.

Note: The General Plan Diagram and Circulation System diagram indicates a need for some road widenings not listed here. These projects are not anticipated to be needed within the 20-year horizon of the 1992 General Plan, but right-of-way should be reserved consistent with the designations on the diagrams.

Source: Dowling Associates, City of Turlock, updated 2002

Implementing Policies

Regional Cooperation

5.2-g Continue to work with the California Department of Transportation (Caltrans) to achieve timely construction of programmed freeway and interchange improvements.

Caltrans does not currently fund local interchange improvements to accommodate increased traffic growth.

5.2-h Continue to coordinate the City's design standards for regional roadways with the standards of other agencies.

5.2-i Seek the following amendments to Stanislaus County's 1990 Regional Expressway Study:

- Change Golden State Boulevard's designation to Class C for the portion between Taylor Road and Linwood Avenue; and
- Eliminate the need for the Expressway shown for the alignment of Washington Road north of Taylor Road with an overpass of Highway 99. The Taylor Road/Highway 99 interchange can be upgraded to provide the necessary connection.
- Evaluate need for Taylor Road expressway status east of North Golden State Boulevard (see NWTSP, 1995)
- Evaluate need for Waring/Verduga expressway

The General Plan process allowed a detailed examination and refinement of the Expressway Plan. Though the designation of some streets is different in the two plans, overall objectives are similar. These changes will result in consistency on major policies.

An amendment to the Expressway Study was initiated in 1999, and formally adopted into the 2001 Regional Transportation Plan in February 2002. The amended Expressway Study includes an inventory of each expressway segment and evaluation of current conditions. The amendments to the Turlock Planning Area expressway system includes deleting

Waring/Verduga corridor and Taylor Road, and adding Christoffersen Parkway. Washington Road north of Taylor is also deleted as an expressway. Golden State Boulevard is redesignated to a Class C expressway from Monte Vista Avenue to Berkeley Avenue.

5.2-j Work with Stanislaus County to implement redesign of the Golden State Boulevard/Golf Road intersection.

5.2-k When proposed General Plan amendments would generate 1,000 or more average daily vehicle trips, analyze their potential impacts on the designated Congestion Management Program (CMP) System of State Highways and Principal Arterials.

The Stanislaus County Congestion Management Program establishes this requirement. The Stanislaus County 1992-1993 CMP does not designate any principal arterials in the County. Future CMP updates should be reviewed by the City to identify whether any streets in Turlock have been so designated.

5.2-l Conduct an annual cumulative impact analysis of all General Plan amendments, focusing on potential impacts on the designated Congestion Management Program System of State Highways and Principal Arterials.

The Stanislaus County Congestion Management Program establishes this requirement. The results of the analysis could be incorporated into the City's annual General Plan review.

Street Network

See also policies in Section 7.4: Street Design and Connectivity.

5.2-m Continue to implement the Circulation System Planning and Design Criteria found in General Plan Appendix A.

5.2-n Locate freeways, expressways, and arterials according to the general alignment shown in the Circulation Plan Diagram. Slight variation from the depicted alignments for Major and Minor Collectors will not require a General Plan amendment.

5.2-o Build freeways, expressways, arterials, and collector streets in accordance with adopted city standards.

5.2-p Ensure improvements to the circulation system required to maintain standards as set forth in Section 5.1. Improvements shall take place in accord with the City's Capital Improvement Program.

5.2-q Implement design standards for Industrial Streets that recognize the heavier loads associated with truck operations and provide larger turning radii to facilitate truck movements.

Section 5.6 contains detailed policies relating to truck movement.

5.2-r Limit street right-of-way dimensions where necessary to maintain desired neighborhood character. Consider allowing narrower street rights-of-way and pavement widths for local streets in new residential subdivisions.

See also Section 7: City Design Element.

5.2-s As part of the Capital Facilities Fee Program (CFF), annually update a seven-year program of projects required to construct and/or update circulation facilities. The analysis should identify the type of facility, length of the project, right-of-way requirements, physical improvements required and estimated cost.

While some of the projects identified in the Circulation Element are in the City's current CFF, the remaining will need to be incorporated. See also Policy 5.1-e. The CFF should also be coordinated with planning for the provision of public utilities. (See Section 4.3.)

5.2-t Coordinate with Stanislaus County to evaluate the condition of existing streets in unincorporated areas and explore cooperative funding mechanisms to improve existing substandard streets and install sidewalks, curbs, gutters, and street lighting as a condition of incorporation.

Streets in many unincorporated "islands" are not built to City standards. The establishment of improvement districts should be considered for their upgrade.

5.2-u Continue to work with residents of neighborhoods with alleys to establish an ongoing alley- maintenance program.

Storage and trash dumping has reduced the available right-of-way in many alleys, especially where alleys are not intensively used

because access to off-street parking is also provided from the streets.

5.2-v Require consistency with street design standards in Appendix A.

Financing

5.2-w Link improvement projects to the most current estimates of available funding from County, State, and federal sources. Continue to participate in the effort to develop and coordinate a financing mechanism for major regional transportation improvements.

5.2-x Continue the current development fee program to equitably assess property owners their share of the costs to mitigate impacts generated as a result of development.

Preservation of Rights-of-Way

5.2-y Take appropriate action to establish precise alignments based on the General Plan diagram and on standards delineated in Table 5.2–A, and on CalTrans local route requirements, for all existing and proposed freeways, expressways, arterial and collector streets in order to identify future right-of-way needs.

Street designations in the Plan are based on consideration of long-term growth in through-traffic and potential development in areas adjacent to the City.

Relationship Between Modes

See also policies in sections 5.3 and 5.4 and Section 7 — City Design Element.

5.2-z In reviewing designs of proposed developments, ensure that provision is made for access to current and future public transit services. In particular, pedestrian access to arterial and collector streets from subdivisions should not be impeded by continuous segments of sound walls.

5.2-aa Design considerations for arterial streets in newly developing areas should provide for bus loading and unloading without disruption of through-traffic. Arterial streets adjacent to major traffic generators such as schools and shopping centers should have assured access to the interior of adjacent development.

The new neighborhood centers will serve as excellent transit stops.

Parking

5.2-bb Improve Downtown parking opportunities using the following strategies:

- Examine rear or vacant lots and other under-utilized areas for off-street parking;
- Consider utilization of the existing parking district mechanism to finance Downtown parking and related street landscaping improvements suggested in the Downtown Master Plan; and
- Consider construction of additional parking facilities at First and "A" Streets.

A Downtown Property-Based Improvement District (PBID) was formed in August 1998 to assist in the funding and implementation of the 1992 Downtown Master Plan. As part of this process, a $5.5 million bond was awarded to the Turlock Redevelopment (RDA) in March 1999. New parking lots, streets, sidewalks and landscaping were installed along East Main Street, Market Street, and South Broadway in 2001 as part of the Downtown redevelopment project.

5.2-cc Work with local merchants to improve parking conditions in underserved commercial areas.

The Lander Avenue commercial area is one such place.

5.3 TRANSPORTATION SYSTEMS MANAGEMENT

The term Transportation Systems Management refers to measures designed to reduce peak-period auto traffic by making more efficient use of existing resources, and emphasizing transit, ridesharing and non-automobile alternatives.

REGIONAL PROGRAMS

Regional Transportation Plan. StanCOG's policy with respect to Transportation Systems Management (TSM) is set forth in the 1990 Stanislaus Area Transportation Plan. The Transportation Plan supports a variety of measures though no specific tasks are assigned to Turlock. StanCOG adopted the Regional Transportation Plan (RTP) in 1992 that superceded the 1990 Stanislaus Area Transportation Plan. The main goal of the RTP is to establish a long-term plan to achieve a balanced transportation system for people and goods. The RTP has been updated every two years and the 1998 RTP is the latest adopted document. The 2001 RTP was adopted in February, 2002.

StanCOG also supports non-motorized transportation facilities, to serve as an alternative to the automobile, through allocation of two percent of Local Transportation Funds. Turlock supports StanCOG programs for ridesharing services through a joint effort of StanCOG and the San Joaquin County Council of Governments and Caltrans.

PUBLIC TRANSIT

Turlock's relatively small size and rural surroundings had traditionally resulted in a small role for public transportation. Only 0.5 percent of Turlock's workforce uses public transportation to travel to work. (See Table 5.3–A.) Due to the low demand, the City maintained only a demand-responsive bus system. However, in the late 1990's, the City transitioned from its exclusively demand responsive operation to a fixed route system. This had been the result of one primary motivation: the Turlock service area was approaching the limits of what a demand responsive transit service could most efficiently serve. The transit industry generally considers 50,000 to be the population threshold where the transition from demand responsive to fixed route should occur and the 1999 population was approximately 57,000. The overall service area is approximately 21 square miles. A research study concluded that a gradual transition from demand responsive to fixed route service would be the most efficient use of city resources.

Fixed Route—BLAST. The City initiated a new fixed route service, on November 16, 1998 known as the Bus Line Service of Turlock, or the "BLAST". The service was initiated with two loop routes, each with a 50-minute headway. The routes operate between 7:00 a.m. and 6:25 p.m. Each of the routes originate from the Wal-Mart Shopping Center, on Fulkerth Road, near Highway 99, where they are timed to meet. In

Central Park (a stop on Stanislaus Regional Transit's Turlock Stage and on Merced County Transit System's North County Route) as well. Saturday service is on the same routes, with operations between 9:00 a.m. and 5:30 p.m. There is no service on Sundays or on ten designated holidays.

Based on the past success of the BLAST, the City Council approved the creation of a third route on March 23, 1999 with service commencing in June of 1999. With the addition of the third route, about 90 percent of the city is now served by the BLAST.

In 2001, the City began the preparation of a five year master plan for transit service. The transit master plan will examine capital needs, fares, and a fourth fixed route including service to Denair.

Demand Responsive—Dial-a-Ride Turlock. The City has continued to operate its demand responsive service, which it calls Dial-A-Ride-Turlock, or "DART", for short. Effective November 16, 1998 the DART service functioned in two manners. First of all, it was a general public service for the Turlock Transit areas more than ¼ mile away from a BLAST route. Secondly, it functioned as the required Americans with Disability Act transit service, offering door to door transit to those residents of the Turlock Transit service area who live within the ¼ mile service area of the BLAST, but who have disabilities making them incapable of using the BLAST service. The DART operates in the same hours at the BLAST. The remainder of the transit service area, including the entire Town of Denair, is provided general public DART service.

Turlock Dial-A-Ride renewed its contract with Laidlaw Transit, Inc. in 2001. The DART service is operated with City owned vehicles, which had been used for the demand responsive service since before the initiation of the new DART service.

Inter-regional Transit. One inter-regional bus companies, Greyhound, serves the Turlock community.

Intra-county Transit. The Modesto Turlock (MT) Stage, operated by Stanislaus County Transit, offers bus service between the two cities with additional connections to Ceres, Keyes and Denair. The MT Stage was initiated in 1981 and currently has eight daily runs Monday through Friday, all serving the 9th and I Street transfer center in Modesto.

Residents of the Turlock community are also served by Amtrak, which runs on the Santa Fe Railroad tracks through Denair. The San Joaquin run

offers short passenger trains that make four stops daily, providing direct rail access to other communities in the San Joaquin Valley, with connections to all other Amtrak routes and stations including national routes. There is a small passenger kiosk in Denair.

TABLE 5.3–A
TURLOCK EMPLOYED RESIDENTS' MEANS OF TRANSPORTATION TO WORK, 1990

Means of Transportation	As Percentage of Total (13,876 Workers)
Car, Truck or Van:	
Drove Alone	79.5
Carpooled	12.8
Public Transportation:	
Bus or Trolley Bus	0.3
Streetcar/Trolley Car	0.1
Subway or Elevated Railroad	0.1
Motorcycle	0.2
Bicycle	1.3
Walked	3.3
Other Means	0.5
Worked at Home	1.9
TOTAL	**100.0**

Sources: 1990 U.S. Census; Blyaney Dyett Greenberg.
(This table will be updated when the 2000 Census data is available.)

Guiding Policy

5.3-a Continue to cooperate with other agencies and jurisdictions to promote local and regional public transit serving Turlock.

Implementing Policies

5.3-b Adopt and implement a trip reduction and travel demand ordinance that is consistent with the requirements of the Stanislaus County CMP.

5.3-c Support efforts to provide passenger train services to the Sante Fe tracks.

5.3-d Continue to support the MT Stage service provided by Stanislaus County.

5.3-e Improve the City's dial-a-ride system. Aggressively pursue transit grant funds in order to continue a new bus-purchasing program to replace ailing existing buses.

5.3-f At an appropriate time, undertake a study to evaluate feasibility of fixed-route transit service, either in place of, or in addition to the dial-a-ride service.

This policy has been met with the introduction of the "BLAST" fixed route bus system in 1998.

5.3-g Statistics for ADA service should be accounted separately from those for the general public dial-a-ride service.

5.3-h The City should continue in its present course of expanding its fixed route service.

5.3-i The frequency, routing and coordination of local transit services should be monitored for consistency with the requirements of the Stanislaus County CMP.

The County Congestion Management Plan includes minimum standards regarding these factors in an effort to enhance the coordination within the regional transportation system.

5.3-j Continue to consider the implementation and funding of feasible Transportation Systems Management techniques that may be effective in Turlock, including establishment of bikeways, park and ride lots, and coordinated transit services.

Over half of Turlock's employed residents worked in the City in 1990, as reported by the U.S. Census and shown in Table 2.9-A. This means that TSM techniques aimed at persons with long commutes are unlikely to be successful in the city. TSM programs need to reflect the City's particular employment and commute patterns in order to be successful.

5.4 PEDESTRIAN AND BICYCLE CIRCULATION

Turlock's flat topography and its mild rainfall are ideal for commuting and recreational bicycle riding, and walking. However, the scorching summer sun and unshaded streets can be deterrents to both bicyclists and pedestrians.

The Census data on means of transportation to work (see Table 5.3-A) does not reveal a significantly higher incidence of bicycle use compared to other communities in Stanislaus County (3.3 percent of the employed residents walked to work). The data, however, does not take into account CSUS students who ride bicycles to the campus.

The Plan encourages the use of walking and bicycling and recognizes three classes of bikeways:

> **Bike Path** (Class I Bikeway, including paseos and public greenways). Provides a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with cross flows by motorists minimized.
>
> **Bike Lane** (Class II Bikeway). Provides a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through-travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and motorists permitted.
>
> **Bike Route** (Class III Bikeway). Provides right-of-way designated by signs or permanent markings and shared with pedestrians and motorists.

Figure 5–2 depicts existing and future bikeways. Bike Paths and Lanes are consolidated in the Figure. The only existing Bike Paths are Del's Lane (Pedras Road to Hawkeye Avenue), Crowell School (Eastside) and CSUS (inside perimeter). The Bikeway Plan was updated consistent with the Regional Bicycle Action Plan.

Guiding Policies

5.4-a Promote walking and bike riding for transportation and recreation.

5.4-b Recognize and meet the mobility needs of persons confined to wheelchairs.

The Americans with Disabilities Act (ADA) establishes requirements for accommodating disabled persons.

5.4-c Provide safe and direct pedestrian routes and bikeways between places.

Implementing Policies

5.4-d Implement land use policies designed to create a pattern of activity that makes it easy to shop, play, visit friends, and conduct personal business without driving.

The neighborhoods described in the Land Use and City Design elements are designed to promote non-motorized transportation and to make it easy for those people who don't drive to be independent.

5.4-e Identify possible funding sources, to make improvements necessary to implement the Bikeways plan depicted in Figure 5-2.

While the City has adopted a Master Bikeway Plan, an implementation program that includes priorities and a schedule needs to be established.

The City of Turlock adopted the Air Quality Trust Fund (TMC 3-9-700ART) in 1993 which new development to pay a fee that would assist the funding of local projects that can contribute to the enhancement of air quality.

5.4-f Continue to designate a portion of the City's annual street construction and improvement fund for financing bikeway design and construction.

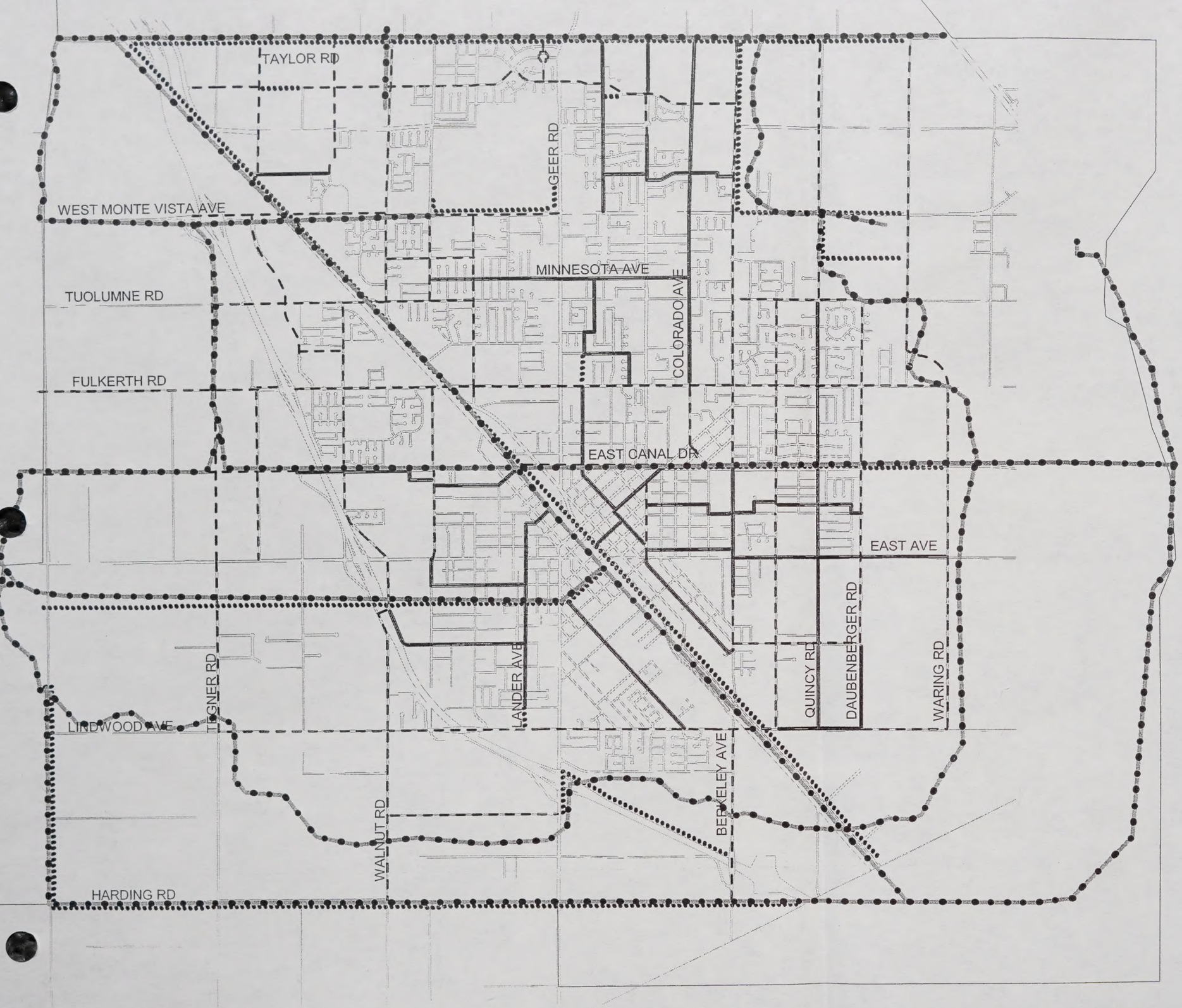
5.4-g Include requirements in the City TSM Ordinance for provision of bike-storage and other support facilities at employment sites and public facilities as a condition of project approval.

Due to changes in state law, the City has not adopted a TSM ordinance.

5.4-h Establish a program to encourage bicycle use among City employees.

Bikeways & Trails

Figure 5-2



Bike Path (Class I)

Bike Lane (Class II)

Bike Route (Class III)

Trailway

N

0 4000 8000 Feet

Turlock
General Plan

City of Turlock, Planning Division
Updated January, 2002

Bike storage facilities and shower and locker rooms should be provided where feasible.

5.4-i Ensure that planting plans for street trees take into consideration shade and comfort for pedestrians and bicyclists.

Particular attention should be paid to places frequented by pedestrians, such as Main Street and other areas in Downtown and the Civic Center. Detailed measures relating to street trees are prescribed in Policy 7.4-e.

5.4-j Provide safe bicycle access to Pedretti Park.

5.4-k Install and maintain bike storage facilities at principal bicycle trip ends including Downtown, CSUS, major employers, and higher density residential projects.

5.4-l Continue working with the Turlock School Districts to ensure that school district attendance areas are drawn so as to minimize crossings of expressways and major arterial streets.

5.4-m Provide safe bicycle access to and parking facilities at all community parks.

5.5 AVIATION FACILITIES

The City of Turlock owns a municipal airfield that is located approximately 8 miles east of the City off of East Avenue and Newport Avenue. The airport is not only outside the incorporated City limits but is also situated in the adjoining Merced County. The airfield facility was originally constructed by the federal government as an overrun field for Castle Air Force Base, located approximately twenty miles to the south in the community of Atwater. The City acquired the 640-acre site in the late 1940s through a transfer from the federal government under the Surplus War Property Act of 1944. Since that time the City has managed and operated the Airport as a small general aviation facility.

In 1951 the City sold 307 acres that were not being utilized for airport operations to a private landowner for an agricultural operation. The proceeds from the sale were reinvested into airport operations and improvements. Approximately 250 acres of the remaining airport property are now leased to a private operator for an agricultural operation.

Historically, the Turlock Airport has been operated under an airport lease or contract management agreement. Currently, the City has a management contract with a fixed-base operator that serves as an on-site manager for purposes of aircraft maintenance and fuel sales. The City provides administrative support in the form of rental of tie-downs and hangar spaces and the collection of monthly rental/lease fees. The City has also established an Airport Advisory Committee that advises the Council on operational aspects of the airport facility.

In 1999, approximately 50 aircraft (40 hangers and 10 tie-downs) are based at the Turlock Municipal Airport. Approximately 75 percent of these aircraft are owned by Turlock residents. The present general aviation operations are estimated to include approximately 15,000 operations annually. It is estimated that two-thirds of these, approximately 10,000, are operations performed by aircraft that take off at one airport and land at another. The remaining one-third (5,000) are estimated to be local operations, those flying within the local traffic pattern or within a 20-mile radius of the airport.

In 1991 the City completed and adopted an Airport Master Plan Study. The study was coordinated with the City of Turlock, the Turlock Airport Advisory Committee, County of Merced, Merced County Airport Land Use Commission, Merced and Stanislaus Associations of Governments (COGS), Castle Air Force Base, the Federal Aviation Administration, CalTrans and other federal, State and local agencies. The Master Plan identifies future airport levels of service, future estimated general aviation demands, potential airport facility improvements, and possible management and organizational options to keep the facility active.

Historically, the City has maintained a general policy that the Turlock Municipal Airport will be a self-supporting facility. In other words, funds derived from the agricultural lease, the tie-down/hanger rentals, and a modest fuel flowage fee would be used to maintain and improve the facility. As of 2001, the Turlock Airport was running as a self-supporting facility.

The State of California utilizes a model to assist local governments in determining the indirect economic benefits that generally result from a local airport facility. This model is based upon three general variables: the revenue derived from fixed base operation(s); the personal property taxes assessed on the private aircraft based at the facility; and the "visitor dollars" that the community received from transient aircraft frequenting the facility. In Turlock's case, there is little to suggest a positive impact in

any of these areas. First, historically very little income in excess of operational costs has been received from the fixed base operators. Second, since the facility and it's fixed base aircraft are located in Merced County, the City received virtually no share of the personal property taxes paid by the aircraft owners. Third, since transient tie-down activity is virtually non-existent, there would appear to be little "secondary spin-off" revenue that could be expected from out-of-town visitors.

Guiding Policies

5.5-a Maintain existing facilities and operations at the Turlock Airport and seek to improve facilities as funding appropriations permit.

5.5-b Maintain compatibility of Turlock Airport operations with development in the surrounding area.

Coordination with Merced County Planning Department and the Airport Land Use Commission (ALUC) will be required.

Implementing Policies

5.5-c Continue to monitor and update as needed the Turlock Airport Master Plan including it's implementation programs.

The Master Plan addresses issues such as maintenance and upgrading of facilities and outlines the long-term objectives for the airport.

5.5-d Finance improvements to the Airport through user fees, and state or federal funds earmarked for general aviation facilities.

As of the General Plan Review, the airport was self-sufficient. When funding becomes available, the airport has used state or federal funds; for example, in 1999, using CalTrans funding, the runway and taxiway were seal coated.

5.5-e Consider the Master Plan recommendations to undertake an expanded analysis to determine alternative methods of airport ownership, management, and operation.

In acknowledging the declining level of local funding support, along with the continued need for airport improvements, the 1991 Airport Master Plan also identified possible management/ ownership options for the airport. These options included full City

management (no contract services), use of a Joint Exercise of Powers agreement with other public or private entities, and a California Aviation District management. Another possible option that might be worth exploring is ownership and management by a users-group organization.

Explore all feasible methods to increase responsibility of a positive user/benefit operation while decreasing a subsidy from the City General Fund.

In 1993, the City entered into an agreement to execute a fixed based operator and airport management services agreement; therefore increasing operation responsibility and decreasing subsidy from the City General Fund.

5.5-f Encourage cessation of flight operations at the private airpark in south Turlock.

A small privately owned airpark is located in the southern part of the City and is subject to various use and size restrictions due to its proximity to Highway 99. This airpark is used only infrequently, primarily by ultra-light aircraft and radio-controlled model airplanes, and has generated complaints from neighboring residents.

The Plan recognizes the goal of discouraging the continuation of existing incompatible land uses throughout the planning area.

5.6 GOODS MOVEMENT

Truck Movement. Manufacturing is the largest single employment sector for Turlock residents; together with other industrial activities such as food processing and wholesale trade, it represents a significant part of Turlock's expanding economic base. Efficient regional connections are prerequisite to the expansion and continued operation of these industrial activities, as well as for the provision of goods and supplies to the other sectors.

In recognition of the special design consideration for truck routes, and to minimize neighborhood disruption, the City in 1984 adopted a resolution

delineating special truck routes. Figure 5-3 depicts the comprehensive truck routing system for the City.

Railroad. Railroad activity in 2001 includes approximately 18 freight train operations per day along the Union Pacific Railroad (UPRR) track running parallel to Golden State Boulevard passing through some residential areas. A maximum of two local freight trains operate per day on the local Union Pacific Railroad (UPRR) tracks, which run parallel to Castor Street formerly Tidewater Southern purchased by UPRR. This is an important short line service to the west side industrial area. In addition, the Santa Fe tracks — on which Amtrak runs — pass through Denair.

Guiding Policies

5.6-a Promote the safe and efficient movement of goods with minimum disruptions to residential areas.

5.6-b Minimize the safety problems associated with the Southern Pacific Railroad, and the divisive effect of the track alignment on the City.

Implementing Policies

Truck Movement

5.6-c Incorporate provisions for trucks in the design of routes depicted for truck movement in Figure 5-3.

5.6-d Continue industrial expansion so as to minimize the neighborhood impacts of truck movements.

Areas designated for industrial expansion in the Plan are to the west of Highway 99, which will continue to serve as a buffer between residential and industrial areas.

5.6-e Establish a signage system to direct trucks to the designated routes.

5.6-f Encourage high-security off-street parking for tractor-trailer rigs.

Locate parking in areas with demonstrated need and where police patrol can be provided. High visibility, including good lighting, should be provided.

5.6-g Explore possible funding sources, including user fees, to help finance truck routes and parking, at least in part.

5.6-h Locate thoroughfare commercial uses in areas easily accessible by trucks.

The Plan provides for development of a thoroughfare commercial hub in the area near Highway 99, Golden State Boulevard and Monte Vista Avenue.

5.6-i Explore the feasibility of establishing a new east-west truck route within the General Plan Study Area.

Railroad

5.6-j Continue the ongoing comprehensive program to improve the condition and safety of existing railroad crossings by upgrading surface conditions and installing signs and signals where warranted.

Special consideration must be given to improving access to Downtown.

5.6-k Explore potential for providing new grade-separated crossings across the Union Pacific Railroad (UPRR).

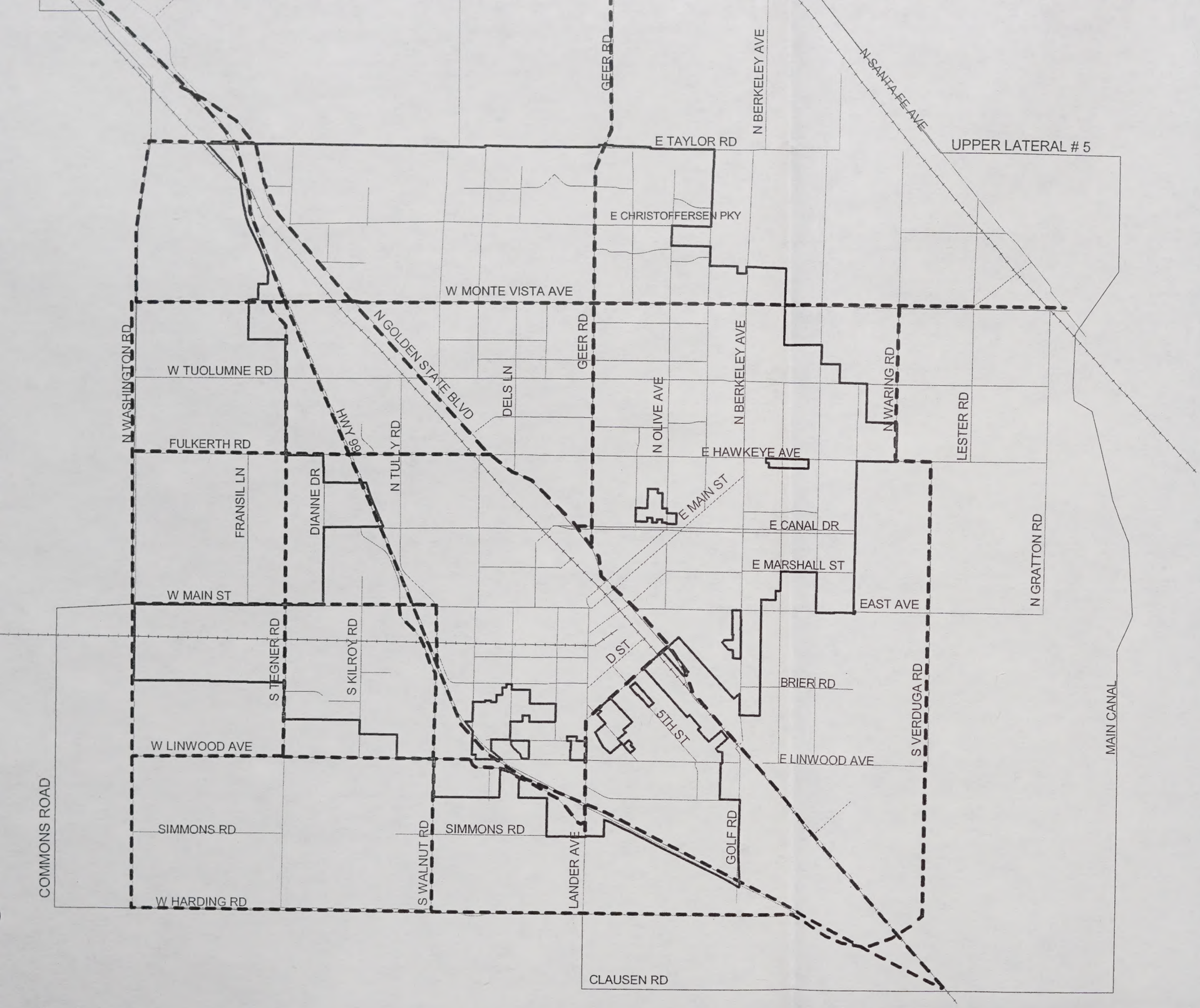
The infrequent crossings across the Railroad represent a barrier to the closer integration of the north and south parts of the City.

5.6-l Establish a financing program for railroad crossing improvements through such mechanisms as a special assessment district (municipal revenue bonds) or tax-increment financing (redevelopment district).

Concrete crossings were installed by UPRR throughout Turlock in 2000-2001.

Truck Route

Figure 5-3



Truck Route

City Limit

N

0 4000 8000 Feet

Turlock
General Plan

Updated January, 2002
City of Turlock, Planning Division

Section 6
Open Space and Conservation Element

State law requires that four types of open space be addressed in an open space element. These are:

- Open space for the preservation of natural resources, including natural vegetation, fish and wildlife, and water resources.
- Open space for resource management, including agricultural and mineral resources.
- Open space for outdoor recreation, including parks and recreational facilities.
- Open space for public health and safety, such as flood-prone areas and earthquake fault zones.

OPEN SPACE INVENTORY

This inventory summarizes information about lands in each of the four open space categories listed in State law (Government Code Section 65560), making reference to other parts of the General Plan and to the Master Environmental Assessment prepared concurrently with the General Plan.

Several of the land use classifications used on the General Plan Diagram and defined in Section 2.1 apply all or in part to open space lands. The relationship between the four categories of open space and the classifications is described below.

Open Space for the Preservation of Natural Resources. The General Plan Diagram does not designate any lands specifically for the purpose of preserving natural resources, because no plant or animal species or areas of special concern have been located in the Planning Area (see discussion in Section 6.5). Pastures, vineyards, row crops, and orchards that are classified as Open Space for Resource Management, however, may serve as habitats or foraging areas for a variety of species.

Also sometimes classified in this category are natural surface-water bodies. None are found in the Planning Area, though surface water from outside the Planning Area is distributed for irrigation purposes by canals owned and operated by the Turlock Irrigation District. Most of these are in areas designated for Agriculture or Urban Reserve on the General Plan, though some are within street rights-of-way (for example, Canal Drive).

Open Space for Resource Management. Resource management categories identified in the State Office of Planning and Research's *General Plan Guidelines* include forest lands, agricultural resources, soil resources, groundwater recharge areas, water bodies important for commercial fisheries, and mineral resources. In the Turlock Planning Area, lands in agricultural production and with potential for agricultural production are by far the most important of these categories of open space. No forest lands, water bodies, or significant mineral resources are found in the Planning Area (see Section 6.7).

Agricultural lands planned for shorter-term production are designated as "Urban Reserve" and lands planned for long-term production are designated as "Agriculture" on the General Plan Diagram. Most of these lands have been designated as Prime Farmland by the U.S. Department of Agriculture's Soil Service. The State Department of Water Resources (DWR) has compiled information on crops for Stanislaus and Merced Counties. Maps depicting the USDA's soil classifications and the DWR crop data are included in the City's Master Environmental Assessment. The maps show that virtually all non-urbanized portions of the Planning Area are in agricultural production, with a preponderance of small parcels and a complex pattern of crop distribution. The most prevalent crop categories shown on the DWR maps are almonds, other nuts and fruits, grain, hay and field crops, truck and berry crops, and pasture.

Policies for the preservation and promotion of agricultural production in the Planning Area are found in Section 6.1.

The Planning Area is dependent on groundwater for water used for all non-irrigation purposes. Groundwater recharge areas have not been definitively mapped, though the recharge areas mapped by various sources are in general in the northern part of the Planning Area, overlapping to a considerable extent with lands designated for Agriculture by the General Plan Diagram.

Open Space for Outdoor Recreation. The General Plan Diagram's park and recreation classification includes existing and planned public recreation sites. (See Table 4.1-A for existing parks as of 1990.) Section

4.1 includes policies describing the General Plan program for public parks and recreation, including policies for linear recreation corridors along the irrigation canals' rights-of-way. Facilities for pedestrian and bicycle circulation, which often receive recreational use, and discussed in Section 5.4. There are no segments of the State Trail System in the Turlock Planning Area; the nearest State recreation facility is Turlock Lake State Recreation Area, northeast of the Planning Area.

Open Space for Public Health and Safety. Referring again to *General Plan Guidelines*, issues relating to this category of open space include geology and seismicity, slope stability, cliff erosion, flood-prone areas, and wild land fire risk. No open space lands in this category are designated on the General Plan Diagram. The Planning Area does not include any known geologic faults or areas of significant known geologic instability. The extremely level topography of the area means that risks associated with slopes are negligible. In addition, no parts of the Planning Area have been mapped by the Federal Emergency Management Agency (FEMA) as within the 100-year flood zone.

The one risk identified during the course of General Plan preparation that is potentially of significant impact though extremely improbable is the risk of flooding from dam inundation in the event of collapse of the New Don Pedro Dam. The entire Planning Area is within the dam inundation area. The General Plan Diagram does not designate any open space lands exclusively in the public health and safety classification.

OPEN SPACE PLAN AND ACTION PROGRAM

Every city and county in the State is required to prepare, adopt, and submit to the Secretary of the Resources Agency a "local open-space plan for the comprehensive and long-range preservation and conservation of open-space land within its jurisdiction" (Government Code Section 65563). As shown in Table 6-A, components of the Open Space Plan are found in several General Plan elements.

The open space plan must contain an "action program" consisting of specific programs which the City intends to pursue (Government Code Section 65564). The action program policies are the implementing policies found in each of the General Plan sections cited in Table 6-A below.

A conservation element is required to address issues relating to the management of natural resources to prevent waste, destruction, and neglect, often resulting in an overlap with the requirements of an open

space element. The Open Space and Conservation Element integrates requirements of the two State-mandated elements. Open space for outdoor recreation is closely related to the provision of schools and public parks and is addressed in Section 4: Public Facilities and Services Element; and open space for public health and safety is addressed in Section 9: Safety Element.

TABLE 6-A
COMPONENTS OF OPEN SPACE PLAN

General Plan Section	Topic(s) Addressed
2.1	Definitions of land use categories, including Parks/Golf Course, and Agriculture
4.1	Parks and Recreational Open Space
5.4	Pedestrian and Bicycle Circulation
6.1	Agriculture
6.5	Vegetation and Wildlife
6.7	Mineral Resources

6.1 AGRICULTURE

The region's first settlement by people of European descent, as well as its first commercial agriculture, can be traced to ranchers who saw wealth in supplying food to Sierra gold miners. The first agricultural commodity was wild cattle, raised starting in the mid-1800s. Lack of profit in cattle raising because of difficult weather and shipping conditions prompted the introduction of sheep. A devastating flood in 1862, followed by drought and flock-disease, marked the end of widespread sheep-raising. The next phase of the area's agricultural evolution was experimentation with grain, which heralded an extensive switch to cultivation.

Mechanization was quickly introduced and the region became a leading producer of grains. Farming was successively aided by introduction of the railroad, formation of the Turlock Irrigation District, development of refrigerated shipping, and construction of the La Grange Dam on the Tuolumne River. Extensive farming gave way to intensive methods, and the cultivation of vineyards, orchards, truck crops, dairy products and poultry were introduced. These activities continue to be an integral part of the region's economic and social life. Despite dramatic city growth since the early pioneer days, Turlock still remains dependent on and surrounded by farms, orchards, and other agricultural activities.

As in other parts of the Central Valley, settlements were historically located in the center of rich agricultural lands. This means that urban expansion almost inevitably results in conversion of agricultural land to urban uses. The General Plan Diagram and Plan policies define the long-term edge between urban and agricultural activities, and support continuing agricultural production in the Planning Area.

AGRICULTURE IN THE PLANNING AREA

Most of the agricultural land in the Planning Area is found outside Turlock's corporate limits. A wide variety of crops are grown. Predominant among them are fruits and nuts, with almonds representing a major share.[1] Other area products are grain, hay, and truck and berry crops. About a fifth of the agricultural land in the Planning Area is used as pasture. (See Figure 6-1.)

According to a 1991 study for the State Office of Land Conservation, while 11,960 acres of cropland in Stanislaus County was lost to urban conversion between 1977 and 1988, a larger amount of wildland (13,680 acres) was converted to irrigated cropland[2]. Net irrigated cropland increased by 1,400 acres over the 13 year period. According to the study, alfalfa and irrigated crops were the predominant crops on land that was converted, and the loss of orchards was minimal. Almond orchards accounted for 77 percent of the county's new croplands, in keeping with the overall regional trend of conversion of field crops to more lucrative, but often risky, vegetable, fruit, and nut crops. However, there were a net loss of 3,758 acres of irrigated cropland between 1992 and 1998.

Almost all farmland in the Planning Area is rated by the U.S. Department of Agriculture's Soil Service as either Prime or of Statewide Importance. (See Figure 6-2.) Prime Farmland is the most suitable for a variety of agricultural uses based on soil characteristics, irrigation, and other indicators. Farmland of Statewide Importance is distinguished from Prime Farmland because it is less desirable with respect to rooting depth, permeability, salinity or alkalinity, and/or erosion hazard. These classifications do not provide information about actual productivity of the land, which is also affected by availability of irrigation water, and the use of agricultural management techniques. Many valuable commodities (for example, milk) are produced in areas with relatively poor soils.

---

[1] State Department of Water Resources. *Crop Maps for Stanislaus and Merced Counties.* 1987/88.

[2] Jones and Stokes, *The Impacts of Farmland Conversion in California,* 1991; based on comparison of Department of Water Resources maps.

Recognizing that agricultural preservation policies should not be based solely on soil classification, Stanislaus County's 1992 General Plan Agriculture Element calls for a definition of "most productive agricultural areas" that takes into account soil ratings as well as other factors. Merced County's General Plan defines "productive agricultural land or soils" as those soils rated as prime or of statewide importance or unique on the State's Important Farmlands map, soils in Capability Classes I-IV on the USDA Soil Survey, as well as "poor soils that are presently or potentially producing agricultural commodities." (p. VII-1).

ECONOMIC IMPACTS OF AGRICULTURE AND FARMLAND CONVERSION

In 2001, the price of agricultural land at about $10,000 to $15,000 per acre compares with about $65,000 to 90,000 per acre for residential land and as much as $400,000 for prime commercial land in parts of Turlock. This price differential, along with the uncertainty of farm income, explains why farmland is vulnerable to conversion to urban uses.

Agriculture employs 9.8 percent of the labor force in Stanislaus County in 2000. (Employment Development Department, June 2001.) Stanislaus County agricultural employment increased by 4 percent between 1989 to 2000. Due to a relatively high increase in non-farm employment, which grew by 23 percent between 1989 and 2000, agriculture's overall share of employment is expected to continue to decline over the next few years, though in absolute terms employment levels are expected to remain fairly stable. The increased presence in the region of agriculture-based industries should lend greater support to agriculture in the future.

Agriculture's Regional Impacts. The economic effects of converting farmland extend to secondary impacts in many related sectors, such as food processing and farm services and equipment. The ratio of primary plus secondary economic impacts to primary impacts is termed a "multiplier." Table 6.1–A shows the contribution to regional income by each acre of land under different agricultural uses.

The larger multipliers for fruit, nut, and vegetable crops indicate that these crops have a much greater impact on the economy than do field crops. Also, because many of these crops are more labor intensive, loss of employment would be greater if land devoted to them were to be converted to urban use. However, because parcels are relatively small, and the Planning Area's crop pattern is both complex and changeable, it is not possible to designate lands for urban use in a manner that preserves only high-value crops.

Economic Impacts of Conversion. In 2000, an average production value of approximately $1,473 per acre, conversion over the next 11 years of approximately 3.8 square miles (2,448 acres) of agricultural land contiguous to Turlock's City limits, which may be urbanized consistent with General Plan policies, will result in the loss of $3.6 million, in current dollars, of direct agricultural income annually. This is about 0.3 percent of Stanislaus County's gross agricultural income of $1.19 billion in 2000 (Stanislaus County Department of Agriculture, 2000).

If secondary impacts were to be included, with a high multiplier of 5, loss of income associated with agriculture would be about $7,365 for each acre of land converted to other uses. Economic losses would be offset by the value of urban development, but agricultural productivity in the Planning Area is likely to be irreversibly diminished. Over a wider geographic area, however, conversion of wildland to agriculture is likely to compensate for loss of productivity.

TABLE 6.1-A
REGIONAL ECONOMIC IMPACT OF CROPS, 2000

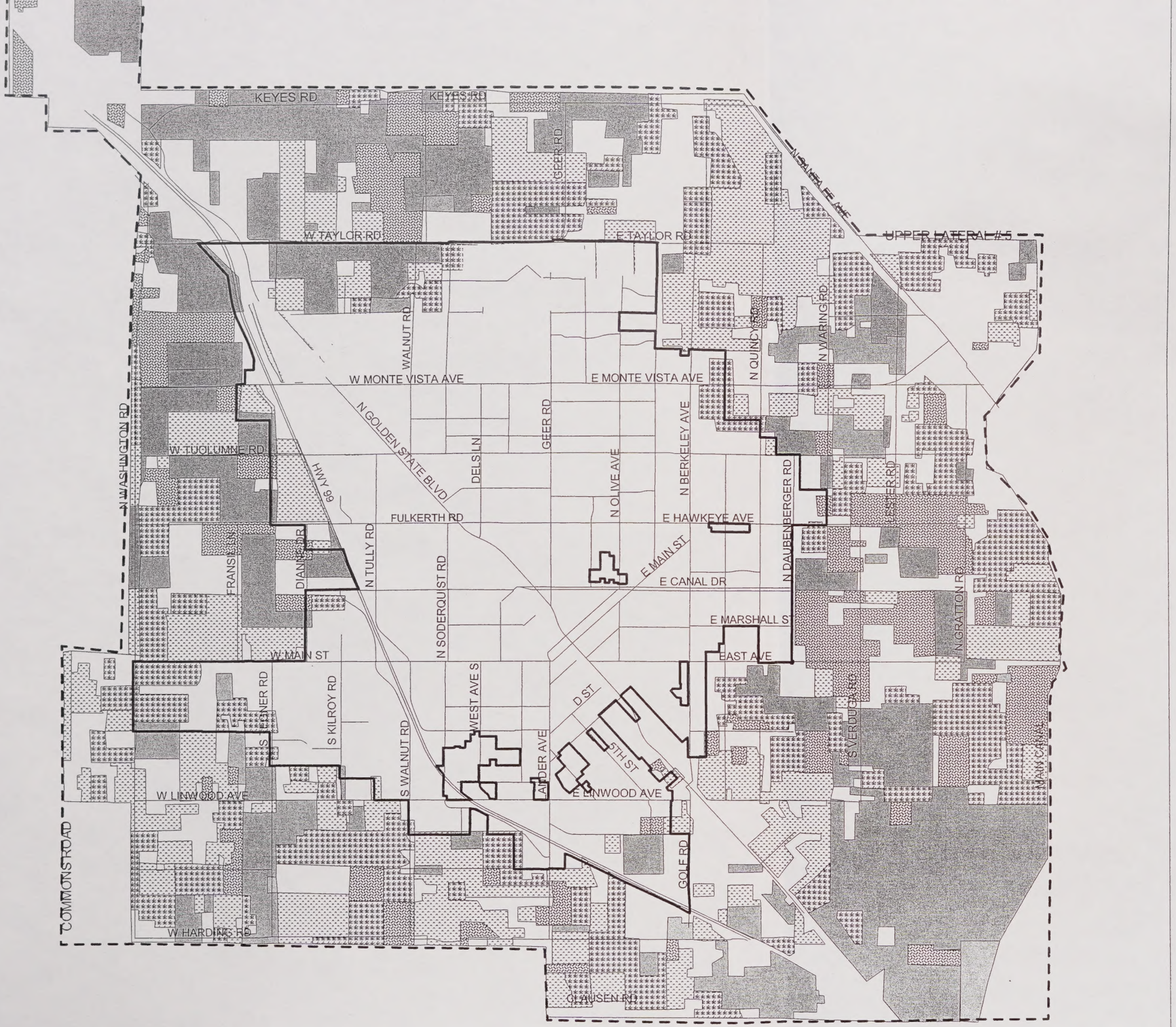
	Production Yield Per Acre in Tons	$ Value Per Ton	$ Value Per Acre	Multiplier[1]	Per Acre Economic Impact
FRUIT AND NUT CROPS					
Almonds, Total	-	-	1,523	2.5	3,808
Apples	10.9	521.2	5,681	8.0	45,448
Grapes, all	9.9	281.3	2,810	7.8	21,918
Peaches	18.5	231.8	4,288	6.0	25,728
FIELD CROPS					
Corn	21.5	19.4	417	2.4	1,001
Hay, Alfalfa	7.6	99.6	757	2.4	1,817
Rice	3.8	177.8	676	2.4	1,622
Wheat	1.9	105.0	200	2.4	480
VEGETABLE CROPS					
Beans, Succulent	1.4	435.6	610	6.8	4,148
Broccoli	5.3	380.0	2,014	6.8	13,695
Cauliflower	4.7	446.7	2,099	6.8	14,273
Melons	9.3	236.2	2,197	6.8	14,940
Tomatoes	36.8	64.1	2,359	7.5	17,693

[1] 1990 multiplier numbers are used

Sources: Stanislaus County Department of Agriculture, 2000

Planning Area Cropping Pattern

Figure 6-1



Almonds

Other Nuts and Fruits

Grain, Hay and Field Crops

Pasture

Truck and Berry Crops

Urbanized Area or Other Crops

Plan Area

City Limits

N

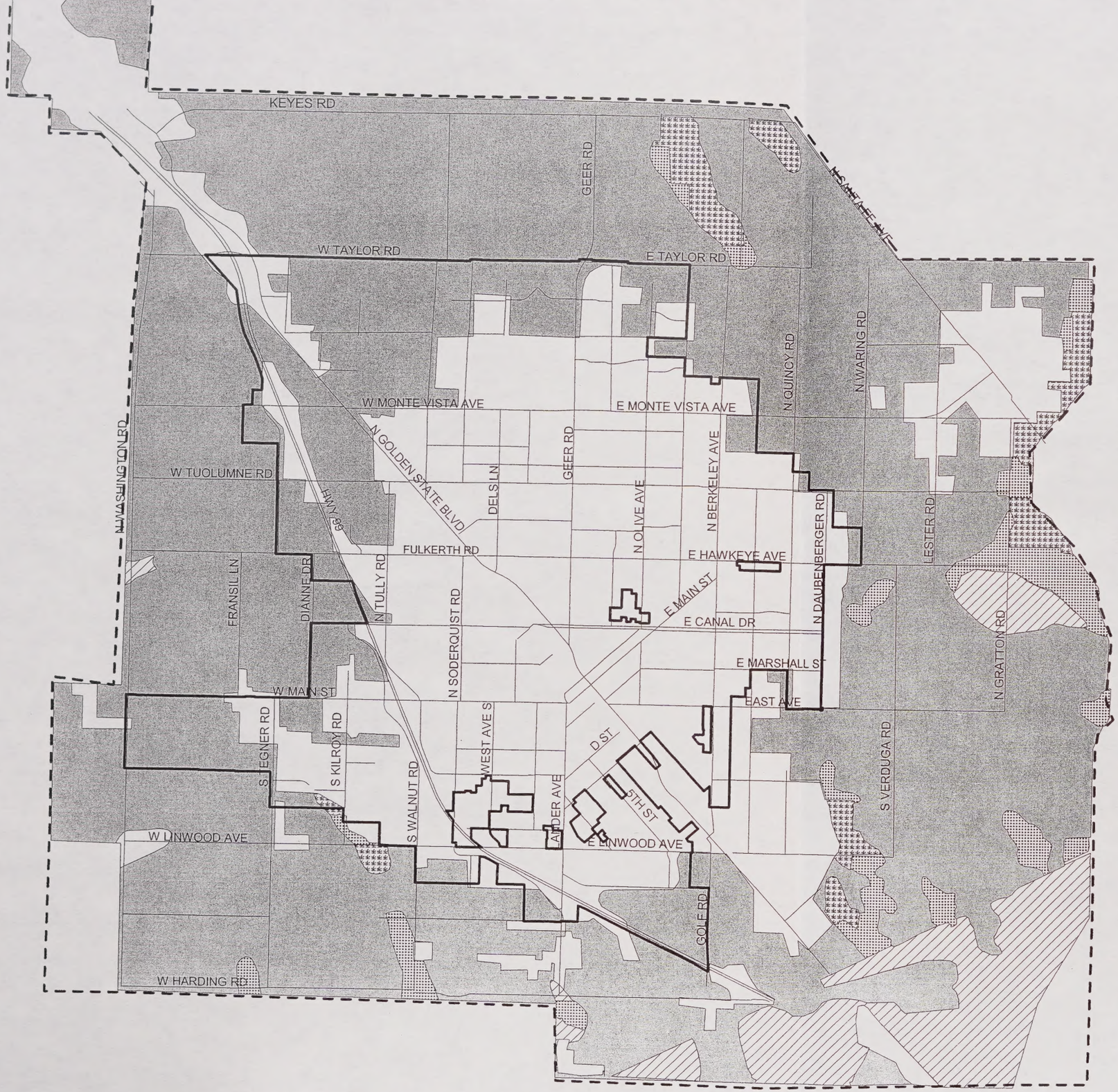
0 4000 8000 Feet

Turlock General Plan

City of Turlock, Planning Division
Updated January, 2002

Important Farmland

Figure 6-2



Prime Farmland

Farmland of Local Significance

Farmland of State Significance

Unique Farmland

Other Farmland or Urbanized Land

Plan Area

City Limits

N

0 4000 8000 Feet

Turlock
General Plan

City of Turlock, Planning Division
Updated January, 2002

Guiding Policies

6.1-a Retain Turlock's agricultural setting by limiting urban expansion to designated areas, providing additional industrial land suitable for agricultural industry, and minimizing conflicts between agriculture and urban activities.

6.1-b Require development at densities higher than typical in recent years in order to limit the amount of land needed for expansion while accommodating urban growth.

Historic densities in older single-family neighborhoods range from 4 to 5.5 units per gross acre. This compares with averages of 4.1 for subdivisions built in 1987, 4.7 for those built in 1988 and 3.8 for those built in 1989.

6.1-c Maintain a compact urban form to minimize the urban/agricultural interface; manage the interface by requiring buffers to reduce conflicts between uses.

See policies on residential/agricultural buffers in Section 7.1.

6.1-d Annex residential land to the City only as it is needed, consistent with policies in Section 2.7 and in the City's Residential Growth Management Program.

The Program specifies that City staff will reject as premature any application proposing prezoning and annexation of land that is not contiguous to the City's existing urban limits or that is not within the City's Primary Sphere of Influence.

6.1-e Support the implementation of Stanislaus County's Agricultural Element and Right-to-Farm ordinance.

The County's ordinance establishes a number of mechanisms designed to protect normal agricultural operations from pressures that can be created by urban neighbors.

6.1-f Work to protect and restore natural resources essential for agricultural production.

The quality of soil, air and water affect agricultural productivity. Policies are in other sections of this Element.

6.1-g Support efforts to reduce air quality problems created in part by agricultural operations.

The San Joaquin Valley is a nonattainment area for PM-10 (airborne particles 10 micrometers or less in size). PM-10 pollution is correlated with a variety of respiratory illnesses, and the Environmental Protection Agency (EPA) believes PM-10 exceedances contribute to damaging the Valley's crops and trees. (See also Section 6.3.)

Implementing Policies

6.1-h Retain Highway 99 as the western boundary of residential neighborhoods.

Other uses equally take up land and result in loss of agricultural production, but conflicts are fewer and historically the city's non-residential edges have been more stable.

6.1-i Require a permanent buffer to be established between residential and agricultural activities along the long-term urban edge of Turlock.

See policies in Section 7.1 for buffer standards. The Agriculture chapter of the 1995 Merced County General Plan and the 1994 Stanislaus County General Plan Agriculture Element both call for buffers between urban and agricultural uses. Coordination with both counties will be necessary to assure successful implementation of buffer requirements.

6.1-j Support agricultural industry within the city but not in the unincorporated portions of the Planning Area.

Stanislaus County permits agricultural industry on land designated by the General Plan for agriculture, but if adjacent or near the city, industrial activity would blur the city's edge and could create demand for annexation and city services. Industrial development within the city is encouraged. (See policies in Section 2.5.)

6.1-k Participate in inter-jurisdictional efforts to improve agricultural practices in order to reduce pollution and health problems associated with particulate matter production and use of agricultural chemicals.

Projects may be undertaken by the San Joaquin Valley Unified Air Pollution Control District, StanCOG, or other organizations.

6.1-l Include analysis of agricultural impacts as part of environmental documents for plans and projects.

Loss of agricultural land at the project and cumulative scales should be considered.

6.1-m Do not annex agricultural land unless urban development consistent with the General Plan has been approved, except when prezoning for industrial use, or when retention as agricultural land is desired to create a separation between communities consistent with the General Plan Diagram.

Agricultural production should be located in the unincorporated area, not in the City.

6.1-n Support participation in the Williamson Act program by Planning Area landowners.

About half of the farmland in the Area is under Williamson Act contract;[3] the exception is the southeast quadrant where there is little land under contract. Part of the southeast area is in Merced County, which has only recently (late 1990's) began to participate in the Williamson Act program. Under the Williamson Act program, farmers agree not to develop their land for 10 years in exchange for a lower tax rate, whereby they are taxed on the land's income-producing value, rather than its "highest and best use." In order to cancel participation in the program before 10 years have elapsed, farmers must pay a penalty of 12.5 percent of the land's fair-market value and attend a public hearing. Owners of about seven (7) parcels in the Planning Area have applied for cancellation of their Williamson Act contracts due to expire between 2001 and 2011.[4] Most of these parcels are located south of Taylor Road and east of Tegner Road within the North Turlock Master Plan.

[3] Blayney Dyett Greenberg estimate from information supplied by the Stanislaus County Planning Department, 1991.

[4] Williamson Act Contract book and list of Notices of Non-renewal. Stanislaus County Assessor's Office. Updated 2001.

6.1-o In locations where agricultural activities may affect nearby residences, require that all deeds recorded include a Right-to-Farm Notice.

This would affirm Stanislaus County's Right-to-Farm Ordinance, by requiring a disclosure notice identical to that used in Stanislaus County, at locations to be identified on a case-by-case basis.

6.2 WATER QUALITY AND CONSERVATION

The discussion below summarizes water quality and conservation issues in the Planning Area. For a more detailed discussion, see the Master Environmental Assessment.

The Central Valley's agricultural productivity is dependent on the availability of water for irrigation. Cropland in the Valley received about 22 million acre-feet of irrigation water annually during 1961-77; about half of it was groundwater[5]. This amounts to about 20 percent of the United States groundwater pumpage.

The high variability in the availability of surface water in the Valley places added importance on groundwater as a source of irrigation water. Use of groundwater during the last 100 or so years has had major impacts on the aquifer system, such as decline in water levels and depletion of aquifer storage. Groundwater is currently the sole source of domestic water for the Planning Area.

GROUNDWATER HYDROLOGY

There are three interconnected bodies of groundwater in the Planning Area—the unconfined/semi-confined aquifer, which is freshwater in the alluvium above the E-clay[6], the confined aquifer contains in the alluvium beneath the E-clay; and saline groundwater in the older marine sediments and rocks beneath the fresh water.

Water Depletion and Recharge. Groundwater levels fluctuate with seasonal rainfall, withdrawal and recharge. Estimates indicate that about 7 percent of pre-cultivation groundwater storage in the Central Valley has been depleted. Due to the regional nature of the groundwater aquifer

[5] Williamson et al. (1989).

[6] The E-clay, also known as the Corcoran clay, is a blue to gray silt/clay layer which occurs in the middle of the older alluvium throughout the Planning Area.

system, actions within the Planning Area alone are not sufficient to curtail the decline in groundwater levels. Within the Turlock Irrigation District boundary area, the City's draw from the underground aquifer is less than 5 percent per year of total pumping.

Rainfall in the TID averages about 12 inches per year, much less than evapotranspiration. The resulting average annual water deficit of about 30 inches is made up by import of about 27 inches of water (600,000 acre-feet) into the Turlock region annually, mostly from the Don Pedro Reservoir, and a net withdrawal of about 3 inches (72,500 acre-feet) from aquifer storage. The urban use of groundwater is much smaller — approximately 30,000 acre-feet per year. During 1961–77, groundwater withdrawal from aquifer storage in the Central Valley as a whole averaged about 800,000 acre-feet/year.

Most groundwater recharge comes from surface application of water in the form of agricultural irrigation — lawn irrigation, precipitation and septic tank seepage account for only a small share of the recharge. In Turlock, recharge to the unconfined/semi-confined aquifer is primarily by irrigation water. Recharge to the confined aquifer is primarily by direct interflow from the top aquifer.

Groundwater Levels. Depth to groundwater in the Planning Area varies from about 35 feet in the eastern part to about 15 in the west and is projected to increase to as much as 90 feet by the year 2020[7]. Between 1976 and 1988, overall water level in the Turlock Irrigation District dropped about 10 feet. In the City of Turlock, static water levels dropped during the last drought. However, after several wet years in the 1990's, the water levels have climbed back to pre-drought levels. In the last 15 years when pumps are operating, the water levels in the Planning Area have dropped 30 feet.

While land subsidence due to declining groundwater levels has been a significant problem in many areas of the Central Valley, there are no records of any subsidence in the Planning Area or its immediate vicinity.

GROUNDWATER QUALITY

Surface water, primarily from agricultural irrigation, percolates over time along with contaminants to the deep water table. In the TID area, groundwater quality in the unconfined/semi-confined aquifer system

[7] Brown and Caldwell, *Turlock Irrigation District Phase I Final Report*, 1989.

varies from poor to good.[8] Of all areas in the District, the incidence of well-water contamination is least in Turlock.

Contamination of groundwater is associated with naturally occurring radioactivity, chloride and trace metals, and with human activity. Nitrate is the most commonly occurring contaminant in the area. It has been introduced into groundwater from fertilizers, septic systems, and possibly livestock. Analysis performed between 1977 and 1988 indicated average level of nitrates in the City wells to be 17mg/liter, much lower than that at any location in the TID. Nitrate levels in 2001 ranged from 3 mg/liter to 26 mg/liter, with the average remaining at 17 mg/liter. However, the City of Turlock has closed one well due to high nitrate levels.

While current contamination trends hold out a much better prognosis for Turlock than the TID as a whole, in the absence of alternative sources of supply, increased demand on water is likely to result in continued deterioration of groundwater quality. This is likely to result in need for well-head treatment and possibly abandonment of additional wells.

WATER CONSERVATION

Conservation Efforts. Prompted by the last drought and previous water shortages, the City, in March 1991, passed a Water Conservation and Education Ordinance. The ordinance aims to accomplish conservation through restricting the times of outdoor residential water use. This program was quite successful in the latter stages of the drought. However, residential per capita water usage has increased dramatically since the end of the drought in the mid 1990s.

In Fall 1991, the City adopted Landscape Water Conservation and Irrigation Guidelines with an aim to reduce the current share (about 50 percent of the total) of water use for residential and commercial landscaping.

Guiding Policies

6.2-a Continue efforts to safeguard the quality and availability of Turlock's water supply.

Adequate early planning will prevent water supply from becoming a constraint to growth.

[8] IBID

6.2-b Undertake steps to minimize the depletion of groundwater reserves.

Aquifer depletion is a valley-wide problem. Use of groundwater for irrigation, over which Turlock has little control, is the prime reason for the declining groundwater levels. The recent extended drought has also been a contributing factor.

Implementing Policies

6.2-c Continue to participate in studies investigating future domestic water supply alternatives; evaluate future source alternatives.

Declining aquifer levels and possible contamination may combine to make groundwater an expensive sole source of domestic water. Treatment of groundwater, water reclamation and reuse, and increased conservation efforts all may offer long-term solutions to Turlock's water needs. The extent to which the City relies on any of these alternatives is likely to be governed by fiscal and political considerations.

6.2-d Continue water conservation efforts.

The recently adopted landscape water conservation and irrigation guidelines, and installation of telemetry are steps in the right direction.

See also policy 4.3-h (Storm Drainage) relating to the use of porous materials in outdoor spaces.

6.2-e Use storm or recycled water for the planned golf course and continue its use for other non-domestic purposes, such as public parks and street tree irrigation.

6.2-f Undertake a cost/benefit analysis to determine the efficacy of metering the entire water-supply system and to identify funding alternatives to implement this conversion.

The absence of water meters in homes constructed prior to January 1992, and the associated difficulty of monitoring consumption by individual connections, is likely to diminish the impact of conservation measures. Experience of other communities indicates that installation of meters alone often results in reduced consumption. The cost of constructing and

operating new wells should be weighed against the cost of metering existing connections. Consistent with State law, all homes constructed from January 1992 onwards are required to be equipped with water meters.

6.3 AIR QUALITY

Turlock is part of California's largest air basin — the San Joaquin Valley Air Basin. The Basin is a receptor of pollutants transported from the Bay Area and the Broader Sacramento air basins, and a contributor to the Broader Sacramento, Southeast Desert, and Great Valley air basins.

As of 2001, the Basin is a "nonattainment area" for Ozone (O_3) and fine particulate matter (PM-10). It has an attainment designation for sulfates, nitrogen dioxide, sulfur dioxide and lead. Because current data is insufficient for hydrogen sulfide and visibility, the Basin has "unclassified" status for these remaining categories. From 1992 to 1998, the unacceptable state levels of ozone were found for an average of 27 days per year in Stanislaus County and 24 days per year in Turlock. From 1993 to 1997, the number of days exceeding the state PM-10 standards were on average 22 days per year in the County, and 13 days per year in Turlock. The urbanized areas of Fresno, Bakersfield, Stockton, and Modesto are classified as "attainment" and all non-urbanized areas of the Basin are classified as "unclassified" for federal carbon monoxide (CO) standards. Fresno, Tulare, Stanislaus, San Joaquin Counties, and the Basin portion of Kern County are designated as "attainment" and Merced, Madera, and Kings Counties are designated "unclassified" by the state for CO standards[9].

The Master Environmental Assessment (MEA) contains a detailed discussion of existing air quality in the Planning Area and the Basin, federal and State air quality standards, and plans and policies of the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD).

Guiding Policies

6.3-a Continue efforts to improve air quality in Turlock.

6.3-b Cooperate with regional and other agencies in conducting studies and developing and implementing air quality standards and regulations.

[9] *Guide for Assessing and Mitigating Air Quality Impacts, Revised 1999*

In February 2002, the City Council agreed to proceed with a good faith effort to implement the Local Transportation Control Measures pursuant to the 1990 Clean Air Act (Resolution 2002-023).

Implementing Policies

6.3-c Implement measures that promote alternatives to automobile use.

Gasoline powered motor vehicles are the largest single source of pollution in the Planning Area. Promotion of alternatives to automobile dependency is a theme of the Plan — the Land Use, Circulation, and City Design elements address the subject in detail.

6.3-d Continue the present policy of not permitting any residential uses within a one-half mile radius of the Sewage Treatment Plan.

Because of this policy, complaints of odor from the Plant have been few.

6.3-e Prevent residential development to the south or west of Highway 99.

Prevailing southward winds are likely to carry pollutants from these sources to the residential areas.

6.3-f Require installation of clean-burning equipment that uses wood pellets for all residential projects that include fireplaces or wood-burning stoves.

6.3-g Cooperate with the San Joaquin Valley Unified Air Pollution Control District to implement indirect source review policies when the program is established.

City Staff reviews new development projects for air quality impacts and refers projects to the San Joaquin Valley Air Pollution Control District for comments. The City of Turlock adopted the Air Quality Trust Fund (TMC 3-9-700ART) in 1993 which requires new development to pay a fee that would assist in the funding of local projects that contribute to the enhancement of air quality.

6.3-h Update the Theme Streets, Subdivision Street Trees and Standards (Resolution 88-130 adopted by the City Council) to incorporate newly designated streets as well as criteria stipulated in Policy 6.3-i.

6.3-i Consider the effect of air pollutants on trees and the role trees can play in removing particulate matter and gaseous pollutants when updating the street tree requirements and standards.

See also policies 6.3-h, 6.4-e, and 7.4-e relating to street trees.

Studies have shown that immediately adjacent to arterial streets, the lead content of air can be about 15 times as high as "normal." Hardy trees, or those adapted to such conditions, are likely to do much better over time with less care than trees that are unsuited.

Rows of trees planted close together and selected and spaced to provide a buffer between the streets and the surrounding areas (such as by a combination of low and high branching trees planted in alternate rows) can be effective in filtering fumes and particulate matter.

The update of the street tree ordinance should also consider reducing existing spacing standards between trees. Spacing standards vary from 40 to 60 feet for all streets on the list; in older areas, such as along Sycamore Street, tall trees are planted as close as 20 feet apart.

6.3-j Establish tree-planting standards for the permanent agricultural buffer.

See also Section 7: City Design.

6.3-k In consultation with SJVUAPCD, promote public awareness about air pollution, and in conjunction with local media, urge voluntary restraint or postponement of use of fireplaces and wood stoves, charcoal lighter fluid, pesticides, aerosol products, oil-based paints, and automobiles and other gasoline engines on smoggy days.

6.3-l Consider carbon monoxide levels at intersection when evaluating the need for intersection improvements.

6.4 ENERGY CONSERVATION

Over 90 percent of the energy consumed in California in 1991 came from fossil fuels[10]. Transportation accounted for about half that amount and industrial uses comprised about 30 percent of all energy consumed. Residential use of energy was limited to about 12 percent of the total. Three-quarters of the total petroleum consumed was by the transportation sector.

Many measures that offer major potential for overall energy savings are beyond the scope and authority of a general plan; for example, federal and State laws regulate vehicle-fuel efficiency; residential-appliance standards are established by the California Energy Commission; building standards are regulated by the Uniform Building Code; and federal regulations govern the construction of manufactured housing and mobile homes. The policies outlined below, then, focus only on measures not preempted by federal or State regulations that can appropriately be influenced through the General Plan.

Guiding Policies

6.4-a Promote a broad range of measures that result in a decrease in the number of automobile trips and vehicle-miles travelled.

Savings in transportation-related energy use offer the greatest potential for reduction in fossil fuel consumption, though the effect of local land use policies on the overall decrease can only be moderate.

6.4-b Encourage energy efficiency through good urban design and site-planning practices, as well as through building design, maintenance and retrofit.

Implementing Policies

6.4-c Maintain a compact form and a land-use pattern that offers alternatives to automobile use and reduces trip-lengths.

The City Design, Circulation, and the Public Facilities elements outline detailed measures pertaining to this policy.

[10] California Energy Commission, *The 1992-1993 California Energy Plan.*

6.4-d As part of the residential design review process, review all development pursuant to Energy Conservation Guidelines (Appendix B of the General Plan).

These guidelines should be made available to all interested developers and designers and could be incorporated as part of the residential design guidelines when they are prepared. The local street network requirements (Section 7.4) have been designed to facilitate east-west streets with north-south oriented houses, a historic pattern of residential development in Turlock.

6.4-e Adopt a comprehensive tree-planting and maintenance program.

Studies have shown that urban development is universally accompanied by creation of "heat islands." Concrete, asphalt, brick, stone, and other materials that replace the natural cover of orchards or crops absorb heat more quickly, store it in greater quantities and cool off less rapidly. The result is that urban areas are warmer than the surrounding countryside, even for many hours after sunset, resulting in greater discomfort and increased need for space conditioning. The temperature difference between a large unshaded parking lot in an urban area and the surrounding countryside can be as high as 15 - 20°F. Plants and water also absorb solar radiation, but expend much of the energy by evapotranspiration, resulting in heat loss rather than gain. Research has demonstrated the effectiveness of carefully planted urban vegetation in reducing ambient air temperatures on hot summer days.

6.4-f Continue to support TID and Pacific Gas and Electric programs to encourage retrofit measures such as weather-stripping and insulation for decreasing energy use in existing residential structures.

A sizeable portion of the residential structures in Turlock were constructed before energy efficiency standards were established, and should be improved.

6.4-g Prepare and implement a plan to promote energy savings in public buildings and streets.

The public sector can serve as a role model for energy conservation. Measures could include employee education, use of lights that need infrequent replacement and automated lighting controls in buildings.

6.4-h Consider conversion of City fleet vehicles to ones that use methane generated from the wastewater treatment plant.

6.5 VEGETATION AND WILDLIFE

Up until about 150 years ago, Turlock was a part of a larger grass- and marsh land where wild animals roamed freely. Settlement, livestock raising, and intensive agriculture have significantly altered the landscape and destroyed all traces of most native plant and animal species and their habitats.

No plant or animal species on the Federal or State Rare, Endangered or Threatened lists are known to exist with certainty in the Planning Area, though habitats such as pastures, vineyards, row crops, and orchards in the Planning Area may provide foraging areas for some of these species, and others that are candidates for listing. There are no riparian areas or vernal pools in the Planning Area — the only large surface-water bodies are irrigation canals and man-made retention basins such as Donnelly Lake. Table 6.5–A summarizes the sensitive plant or animal species that may occur in the Planning Area; the Master Environmental Assessment contains a more detailed discussion of existing vegetation and wildlife.

TABLE 6.5-A

THE CALIFORNIA NATURAL DIVERSITY DATA BASE , SENSITIVE PLANT AND ANIMAL SPECIES FOUND IN THE REGION OF THE PLANNING AREA, 2001

Common Name/ Latin Name	CESA	ESA	CNPS	R-E-D
Birds				
Swainson's Hawk *Buteo swainsoni*	ST			
Tricolored Blackbird *Agelaius tricolor*		FSC		
Fish				
Sacramento Splittail *Pogonichthys macrolepidotus*		FT		
Invertebrates				
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus*		FT		
Reptiles				
Western Pond Turtle *Clemmys marmorata*		FSC		
Plants				
Alkali Milk-Vetch *Astragalus tener var tener*			1B	3-2-3
Brittle Scale *Atriplex depressa*			1B	2-2-3
Delta Button Celery *Eryngium racemosum*	SE		1B	2-3-3
Heartscale *Atriplex Cordulata*			1B	2-2-3
Merced Monardella *Monardella leucocephala*			1A	---
San Joaquin Valley Orcutt Grass *Orcuttia inaequalis*	SE	FT	1B	2-3-3
Vernal Pool Smallscale *Atriplex persistens*			1B	2-2-3

CESA
SE = State-Listed as Endangered
ST = State-Listed as Threatened
ESA
FE = Federal Listed as Endangered
FT = Federal Listed as Threatened
FSC = Federal Special Concern
CNPS = California Native Plant Society.
Also name of one of their ranking systems. See R-E-D.
1A = Plants presumed extinct in California.
1B = Rare, threatened or endangered in California and elsewhere.

R-E-D
Ranking system used by the CNPS.
R (Rarity):
2 = Distributed in a limited number of occurrences, occasionally more if each occurrence is small
3 = Distributed in one to several highly restricted occurrences, or present in small numbers that it is seldom reported
E (Endangerment)
2 = Endangered in portion of its range
3 = Endangered throughout its range
D (Distribution)
3 = Endemic to California

Guiding Policy

6.5-a Make efforts to enhance the diversity of Turlock's flora and fauna.

Street trees should be included in the effort. See Policy 7.4-e.

Implementing Policies

6.5-b Consider creation of suitable habitats that can support a variety of plant and animal species in designing new open spaces such as large community parks.

6.5-c Consider the requirement of biological assessments in conjunction the preparation of new area-wide plans.

6.5-d Consider establishment of special environmental review procedures, such as site reconnaissance and certification by a biologist, as part of the project development application process if new information to support existence of a Rare, Endangered, or Threatened species becomes available.

The Rare, Endangered, or Threatened plant species sighted elsewhere in the region are either vernal pool species or are presumed to be extinct in California and unlikely to be present in the Planning Area.

6.6 WASTE MANAGEMENT AND RECYCLING

SOLID WASTE

The City contracts with a franchise hauler to collect garbage and recyclables at curbside. Garbage is taken to the transfer station on Walnut Road, and from there to the Fink Road landfill near Crows Landing, or to the waste-to-energy facility adjacent to the landfill. The waste-to-energy facility reduces the volume of waste going into the landfill by about 90 percent. According to the, Stanislaus County Department of Public Works, the landfill — the only one operating in Stanislaus County — has capacity until 2017 for garbage and 2023 for the waste-to-energy ash. The total landfill capacity is 6.8 million tons. There are also plans for further expansion.

In accordance with Public Resources Code Section 41000 *et seq.*, a goal of 50 percent waste stream diversion through reduction and recycling has been established. In May 1992, the City's Franchise Agent implemented a dramatic new program to reduce Turlock's waste stream. Instead of voluntary separation by the resident, the program provides three separate bins to each home throughout the City. The largest of these is a 90-gallon container reserved exclusively for garden refuse. Next is a 65-gallon container for all recyclable materials, which are separated by the refuse company after pick-up. Finally, each household is limited to one 32-gallon container for non-recyclable household wastes.

HAZARDOUS WASTE

Contaminated Sites

The Stanislaus County Hazardous Waste Management Plan (CHWMP), which was also adopted by Turlock (1991), identifies industrially zoned sites potentially suitable for locating hazardous waste management facilities. In Turlock, an area in the southwest quadrant of the City is identified for the purpose. As of 2001, there are no hazardous waste facilities operating or planned in the Planning Area. Any projects that may be proposed will be subject to review as per criteria stipulated in the CHWMP.

Sites with contaminated soil and groundwater are also identified in the CHWMP. There are three known contaminated sites in the City area:

- Valley Wood Preserving, located on Golden State Boulevard, is a former wood preserving company that is undergoing clean up by the property owner. Groundwater and soil contamination by copper, arsenic, and hexavalent chromium have been identified on the site. The clean-up of this site is near completion as of 2001.

- City of Turlock, property located at 900 North Palm Street was a dry cleaning site. Perchloroethylene has been found on the site.

- Gilbert Teixeira Dairy, located at 5601 Mountain View Road, is a dairy with contaminated dairy wastewater.

As of June 2001 there were over 100 sites contaminated by leaking underground storage tanks in the County, 36 of which were in Turlock area. The Stanislaus County Department of Environmental Resources is working with the State Department of Health Services and the Regional

Water Quality Control Board to determine the level of clean up needed at these sites.

SOURCE REDUCTION AND RECYCLING

Public Resources Code Sections 41000 and 41300 *et seq.* require each city and county in the State to prepare a Source Reduction and Recycling Element (SRRE) to meet waste diversion reduction goals of 25 percent by 1995 and 50 percent by 2000.

Turlock's SRRE was adopted by the City Council in 1994. The SRRE was later reviewed and approved by the California Integrated Waste Management Board (CIWMB) in 1995. The SRRE includes source reduction, including recycling and composting activities for solid waste generated within the city.

The study also details means of reducing commercial and industrial sources of solid waste. Funding and public information components are also included.

The amount of waste diverted in the City of Turlock was 40% in 1997 and 47% in 2000. In 2001, the Regional Solid Waste Planning Agency (RSWPA) was formed including Stanislaus County and the eight cities within the county. The amount of waste diverted by RSWPA was 51% in 2001.

HOUSEHOLD HAZARDOUS WASTE

In 1991, Government Code Section 65583.1 became effective, requiring that each city and county prepare a separate Household Hazardous Waste Element (HHWE), formerly a component of the SRRE. The HHWE identifies a program for the safe collection, recycling, treatment and disposal of hazardous wastes that should be separated from the solid waste stream and are generated by households. Like the SRRE, funding mechanisms to support the program and a public information program are also included.

The Turlock HHWE is a separate document from the CHWMP. The former deals specifically with household hazardous waste while the latter is a more general plan dealing with all types of hazardous waste.

The Turlock HHWE was adopted by the City Council in 1994. The HHWE was later reviewed and approved by the CIWMB in 1995. Once

finalized, it became incorporated into a single plan known as the Countywide Integrated Waste Management Plan (CIWMP), comprised of the Countywide Siting Element, the Countywide Summary Plan and the SRREs and HHWEs for the County and for each city in the County. The CIWMP in its entirety was reviewed and approved by the CIWMB in 1996.

Turlock currently participates in several household hazardous waste programs. The Countywide Household Hazardous Waste Collection Program (CHHWC) provides public education and collection services for the entire county. In addition to the countywide program, Turlock operates a curbside collection program for used motor oil. Also, it is common practice for automobile parts retailers to accept used lead batteries whether or not a new battery is purchased. Less widespread, though still in operation, is the collection of used mercury batteries by some retail stores and institutions.

In 1992, the County opened its first household hazardous waste permanent collection facility on Morgan Road in Ceres. The County has added a mobile pick-up unit for household chemicals and other hazardous materials which serves Turlock four times a year.

Guiding Policies

6.6-a Reduce the generation of solid and hazardous waste. Promote recycling.

6.6-b Cooperate with State and County efforts to reduce generation of waste, increase recycling and reuse, and provide safe waste disposal sites.

Implementing Policies

6.6-c Implement measures specified in the Source Reduction and Recycling Element and the Household Hazardous Waste Element.

Prepared in response to Public Resources Code Sections 41000, 41300, et seq. and Government Code Section 65583.1, both documents have been submitted to the County for review and inclusion in the CIWMP. It is anticipated that CIWMP adoption and implementation will allow the City to meet its State-mandated goals of source reduction and recycling.

6.6-d Meet the mandatory waste diversion goals set by the State of 25 percent by 1995 and 50 percent by 2000; reduce the disposal of household hazardous waste in landfills by 75 percent in 1993 and 95 percent in 1997.

The amount of waste diverted in the City of Turlock was 40% in 1997 and 47% in 2000. In 2001, the Regional Solid Waste Planning Agency (RSWPA) was formed including Stanislaus County and the eight cities within the county. The amount of waste diverted by RSWPA was 51% in 2001.

6.6-e Work with Stanislaus County to ensure the availability of adequate landfill capacity for Turlock's solid waste.

According to the Stanislaus County Department of Public Works, the landfill has capacity until 2017 for garbage and 2023 for the waste-to-energy ash.

6.6-f Maintain for public review an up-to-date inventory of identified hazardous waste sites in the City. This information should be identified and addressed if needed as part of Turlock's review and analysis of each discretionary development proposal.

All currently identified contaminated sites are listed in the Master Environmental Assessment (MEA).

6.6-g Work with landowners to encourage clean-up of contaminated sites.

The City should not approve a use change or any development project on a contaminated site until such time as the site is cleaned to a level where it is no longer hazardous.

6.6-h Update the MEA periodically, to include information on all known contaminated sites in the City.

The MEA was updated in 2002.

6.7 MINERAL RESOURCES

The Planning Area is underlain by two geologic units, the Modesto Formation and Riverbank Formation. Both are comprised of alluvial fan deposits which include sand, gravel, silt, and clay. The Modesto Formation is estimated to range in age from about 9,000 to less than 100,000 years old, while the Riverbank Formation is estimated to range from about 130,000 to 450,000 years old.

At this time, the State Division of Mines and Geology (DMG) is not aware of any historic or current mining operations within the Planning Area, other than minor excavations for fill material, which is not considered a significant resource. The only significant mineral commodities that might be found in the two formations mentioned above are sand and gravel for road and building construction, although at this time there are no known significant deposits. The sources of most sand and gravel used in the road and construction industry in the Planning Area are from mining operations along the Tuolumne River and Merced River.

The DMG's *Mineral Land Classification in Stanislaus County* study completed in 1993 provides more detailed information on mineral resources within the Planning Area.

Guiding Policy

6.7-a Cooperate with regional agencies to protect significant mineral resources in the Planning Area that may be identified in the future.

In 1993, the State Division of Mines and Geology completed a study on mineral land classification of Stanislaus County which provides more detailed analyses of mineral resources in the Planning Area.

Implementing Policy

6.7-b When and if significant mineral resources are discovered in the Planning Area, work with regional agencies to determine a course of action to protect the resources.

6.8 ARCHAEOLOGICAL RESOURCES

The City in 1989 conducted a survey to assess its historic and archaeological resources. Survey evaluations were based on surface evidence gathered through a records check, map and aerial photograph assessment, and field reconnaissance on foot. No significant historic and archaeological resources were discovered. The survey is included in MEA Appendix C.

Guiding Policy

6.8-a Protect significant archaeological resources in the Planning Area that may be identified during construction.

Implementing Policy

6.8-b Should archaeological or human remains be discovered during construction, work shall be immediately halted within 50 meters of the find until it can be evaluated by a qualified archaeologist. If it is determined to be historically or culturally significant, appropriate mitigation measures to protect and preserve the resource shall be formulated and implemented.

Section 7
City Design Element

One of the main reasons a community commits an exceptional amount of time, energy and dollars to planning is to create a more beautiful and desirable place to live. Turlock residents sent a concise message to City policymakers during the public input process of this General Plan Update: "New development in the community must be attractive."

While a City can establish specific building standards to enhance it's attractiveness, the "visual quality" and the physical well-being of a community is made up of much more than the specific design of individual buildings. It requires the City to examine its geographical setting, recognizing those things that contribute to its visual interest, and develop strategies to encourage their preservation and enhancement. It also includes a serious commitment by the City for public and private improvements that will enhance the image of Turlock in the eyes of both residents and visitors.

The City Design Element addresses the design, use and management of the physical elements that shape Turlock. It seeks to promote visual quality and a fit between residents' needs and city form. While the focus is on issues of citywide concern, critical issues at a more local or area-specific scale are also examined.

7.1 CITY FORM

OVERALL FORM

Turlock's form is compact. The City has steadily grown outward since its inception, but the edges of growth have not reached neighboring communities, and will not do so under General Plan policies. Growth has taken place in all parts of the City, though the thrust of recent expansion has been to the north and northeast. The Plan seeks to maintain Turlock, Keyes, and Denair as free-standing communities, surrounded by farms and orchards, over the next 20 years.

Historically, the establishment of affluent neighborhoods on the town's northeast side and demarcation of a major portion of the southwest for

industrial use was influenced by the southward flow of prevailing winds. Though differences between the north and the south parts of the City have persisted, conscious efforts have been made to avoid a division. For example, sustained community efforts in the early 1960s led to the present alignment of Highway 99 where it skirts the City to the south, unlike in some other parts of the Valley where the Highway traverses through many communities. Nonetheless, the Union Pacific Railroad, with its infrequent street crossings, and the adjacent Golden State Boulevard continue to represent a barrier to closer integration of the north and southwest parts of the City.

CHARACTER AND MIX OF USES

Turlock's historic areas are characterized by a diverse mix of uses within short distances. Smaller shops, restaurants, offices, single-family residences, apartments, automobile dealers, repair shops and civic offices can all be found within a one-quarter mile walking distance of the City's center. Small blocks limit development to a fine-grain, and a continuous street network with frequent intersections keeps visual interest at a high level.

In contrast to this, a diversity of uses and housing types is the exception in most new parts of the City. Growth has led to increased distances between Downtown and new residential areas, creating a need for convenience shopping and services closer to new residences. Strip-retail along arterials emanating from Downtown (principally Golden State Boulevard and Geer and Lander roads, but also West Main Street and East Avenue) and new freeway-oriented regional commercial centers (Countryside Plaza at Freeway 99 and Fulkerth Road and Monte Vista Crossing at Freeway 99 and Monte Vista Avenue) somewhat fulfill this role. However, the large distances between these retail areas and some recent residential developments points to the need for alternative growth patterns. Particularly in the north, all new commercial development is concentrated along Geer Road. The lack of neighborhood shopping opportunities means that some residents must drive as far as two miles for everyday necessities.

URBAN-AGRICULTURAL EDGE

Turlock's existing well-defined urban edge reinforces its image as a town close to the country, a value cherished by many residents. But the proximity of agricultural operations to urban uses also creates conflicts affecting both farmers and urban residents.

The impacts of urban encroachment on farm production include increased farmland theft and vandalism, farmers' liability for personal injury, spread of crop pests, restrictions on use of pesticides, and noise, odor and burning restrictions[1]. Although Stanislaus County has had a right-to-farm ordinance since 1981, which was replaced by a new right-to-farm ordinance in 1992, State and local restrictions and complaints by urban residents often compel modification of farming practices. Increased costs and conflicts at the urban edge can make conversion of agricultural land to urban uses not just an attractive proposition, but a necessity.

As with many cities surrounded by agriculture, some of these conflicts already exist in Turlock. With growth, some of the established edges between agriculture and urban areas are likely to change, exposing new households to farming activities, though the Plan calls for maintaining a defined urban-agricultural edge.

Conflicts relating to farming at the urban-agriculture interface can be minimized by using organic farming practices, or switching to crops that produce fewer conflicts, maintaining on-farm buffer zones or by having a 'greenbelt' around the City. In 1992, Stanislaus County adopted an Agricultural Element for the General Plan that calls for buffers between agricultural and non-agricultural uses — exact width of the buffer is to be determined on a case-by-case basis. Also, a city form that minimizes the perimeter is likely to result in fewer conflicts, while an enlarged perimeter would likely bring more residents into direct contact with agricultural operations.

Guiding Policies

7.1-a Maintain Turlock, Keyes and Denair as free-standing communities by establishing definitive urban edges around Turlock .

7.1-b Allow annexation to the City of Turlock only for land that has an urban land use designation. The City of Turlock shall not annex land designated Agriculture.

7.1-c Maintain a compact growth pattern to avoid sprawl and preserve agricultural land and open space.

7.1-d Minimize conflict between urban and agricultural uses.

[1] Jones and Stokes, *The Impacts of Farmland Conversion in California*, 1991.

7.1-e Provide a mix of uses and activities in various parts of the City.

(See also policies in Section 7.3: Neighborhood Design.)

A mix of uses is likely to result in more even development of the different parts of the City and provide facilities and services closer to where people live.

Implementing Policies

Compact Form

7.1-f Continue present policies of requiring growth to be contiguous to existing urban development.

These policies have worked well to ensure a compact and contiguous pattern of growth and efficient provision of services to new developments.

7.1-g Work with LAFCO to modify the primary and secondary spheres of influence to conform to the growth pattern depicted on the Plan Diagram and restrict development outside the depicted spheres.

See Figure 2-3.

The Sphere of Influence was amended in 1993 consistent with Figure 2-3.

7.1-h Prevent premature expansion of non-industrial uses to the west of Highway 99.

At time of future expansion, the area west of Highway 99 should be considered for non-industrial and agricultural uses only after development depicted on the Plan Diagram has been accomplished.

7.1-i Encourage infill development on vacant parcels through incentives and streamlined approval process for projects.

Direction of Growth and Phasing

7.1-j Ensure that growth in the areas and directions depicted on the Plan Diagram is achieved through establishment of spheres of influence, phasing and project approvals.

Also see policies in Section 2.7: Growth Management.

Urban-Agricultural Buffer

7.1-k Continue urban expansion in a form that minimizes the potential for urban-agricultural conflicts.

A square or a circular city form, with minimal jags, creates a shorter edge of potential conflict than other forms. Also, it prevents creation of finger-like protrusions of urban development into agricultural territory which tend to exacerbate conflicts.

7.1-l Require establishment of an urban edge that creates permanent buffers between residential and long-term agricultural uses as a condition of project approval.

7.1-m Establish decreasing residential densities toward Turlock's defined "urban edge" and implement an "agricultural – urban buffer design" to minimize the impact of urban development near active agricultural operations. Some general characteristics for the "agricultural – urban buffer design" are outlined below. These design characteristics of the urban edge are guidelines. The design details of the urban edge shall be established by an approved area-wide plan pursuant to Policy 2.7h.

- Require significantly deeper lots and enhanced rear-yard setbacks to help ensure adequate separation between habitable structures and active farm land.

- Design and size utility infrastructure to discourage future extensions beyond the definitive urban edge. The use of septic tanks may be permissible, provided all appropriate County Health Department requirements can be met.

- Minimize the number of homes that have direct access onto the public streets that define the City's urban edge by allowing flag lots, access easements, road reservations, and similar rural development patterns.

- Require only minimal street improvements along the City's urban edge to create rural-style neighborhoods compatible with the adjacent agricultural/urban edge areas (i.e. no curb, gutter, or sidewalk shall be installed). Drainage swales may be permissible.

- Ensure that development densities decrease toward the urban/agricultural edge as one of the most important means to buffering urban development and adjacent farming activities from each other. Except where a pattern of transitioning development densities has already been established, from the urban/agricultural edge, residential densities shall generally transition to a minimum density of one (1) dwelling per acre (minimum one acre lot size) within 300 feet of the urban edge.

Mix of Uses

7.1-n Restrict development of large enclaves of a single use. Support efforts that lead to a mix of compatible uses and activities in different parts of the City.

See Land Use Element and other sections of this element for detailed implementation policies.

7.2 DOWNTOWN

The Downtown is roughly one quarter-mile square (160 acres), consisting of a core commercial area of approximately 90 acres, and residential, civic and heavy commercial uses at the periphery. It owes its location and geometry to the Union Pacific Railroad. Historic records indicate that the town survey started at what is now the southeast corner of the intersection of Center and East Main streets. From there, as in most towns of the San Joaquin Valley, an orthogonal street network was extended out parallel and perpendicular to the railroad tracks. Newer parts of the town were laid out in true cardinal directions; the transition between the new grid and the older diagonal one is never clean and is often disorienting.

The emergence of newer shopping centers in recent years, principally along Geer Road, has reduced Downtown's share in the retail and commercial growth experienced by the City. The shopping complexes along Geer Road rival the retail in Downtown in size and exceed it in activity. Geer Road has better access and orientation to the automobile, proximity to newer neighborhoods, easier parking and larger sites than Downtown. Rents and sales per square foot are about twice as high as in Downtown.

Compared to the newer shopping centers, Downtown, with its narrow streets, short blocks (typically 400-foot square), and historic buildings, is

more appealing and better suited to exploration on foot. However, it lacks both a critical mass of supporting activity and attractions that could draw people from afar.

A survey conducted as part of the 1992 Downtown Plan estimates the amount of commercial space in Downtown to be about 1.4 million square feet. Of the 0.8 million square feet of retail space in the Downtown, automobile dealers and home furnishings account for the two largest group of businesses. Eating and drinking establishments, specialty retail and apparel stores together constitute about 350,000 square feet of space. The survey does not consider Downtown's present condition as being prosperous. Banking establishments, the post office and other service establishments have been strong stabilizing elements, and cooperative marketing efforts, such as the Farmer's Market, have increased Downtown's visibility.

Long-term viability. Downtown's long-term economic viability will depend on its ability to compete not only with the newer shopping centers, but more critically with regional discount and retail operations, such as Walmart and freeway-oriented regional shopping centers. Its success will depend on specialty stores offering wider selection than department stores, competitive pricing by merchants, and a pleasant environment for pedestrians where one-of-a-kind shops, restaurants and entertainment facilities can attract patronage from the entire City and beyond.

The 1992 Downtown Master Plan. The Downtown Master Plan offers a comprehensive urban design, parking-landscape framework, and a funding mechanism for implementation. Circulation aspects of the Downtown Plan, however, need to be coordinated better with the General Plan.

Guiding Policies

7.2-a Continue efforts to preserve and enhance Downtown.

Continuing viability of the Downtown is of economic as well as symbolic value to the City. Downtown has scale and character that is hard to replicate in shopping centers elsewhere. The Downtown Plan offers a starting point for guiding Downtown's growth into the future.

Together the Turlock Redevelopment Agency (RDA) and Downtown Property and Business Improvement District (PBID) have been successful with the implementation of the 1992

Downtown Master Plan. A $5.5 million bond was awarded to the RDA in March 1999 for a Downtown revitalization project. The redevelopment project completed in 2001 included the reconstruction of Main Street between Lander and Palm Avenues consisting of the reconstruction of the street, sidewalks, curb, gutter, water, sewer and storm drain lines and will new landscaping, and lighting. Other improvements include nine public parking lots located off Main Street and the adjacent alleyways.

7.2-b Encourage development of Downtown as a mixed-use, day and evening activity center. Encourage office and residential development near Downtown, but minimize conversion of established residences to offices.

There is no strong competing location for accountants, attorneys, dentists, realtors, engineers, and other local-serving office tenants, unless they provide medical services and need to be near the Emanuel Medical Center. Downtown provides a good location for the concentration of non-medical offices.

Implementing Policies

7.2-c Implement the 1992 Downtown Master Plan.

In 1998, after the downtown property owners established the Downtown Property and Business Improvement District (PBID), the Redevelopment Agency took steps to begin implementing the Downtown Revitalization Project.

A Downtown Property-Based Improvement District (PBID) was formed in August 1998 to assist in the funding and implementation of the 1992 Downtown Master Plan. As part of this process, a $5.5 million bond was awarded to the Turlock Redevelopment (RDA) in March 1999. New parking lots, streets, sidewalks and landscaping were installed along East Main Street, Market Street, and South Broadway in 2001 as part of the Downtown redevelopment project.

7.2-d Establish a redevelopment district as a financing tool to assist Downtown improvement efforts.

After the establishment of the Redevelopment Plan in 1993, the Redevelopment Agency was able to secure funds through bond financing in 1999 to begin construction of the Downtown Improvement Project. The Downtown Revitalization Project was completed in 2001.

7.2-e Establish an urban design and historic preservation district as proposed by the Turlock Historical Society.

In 1995, the City Council adopted the Downtown Design Guidelines to assist property owners undertaking renovation and rehabilitation of existing buildings, or construction of new buildings in the Downtown area to remain consistent with the original architectural design elements that created the unique character of Old Town Turlock.

Although no historic preservation district has been created, the Turlock Historical Society remains very active in both City and Civic functions by providing useful information to property owners interested in recapturing the original architectural integrity of historical buildings.

7.2-f Designate the Carnegie Library building, now registered in the National Register of Historic Places, as the ARTS CENTER for the City of Turlock.

The Carnegie Library was designated the Turlock Arts Center in 1993.

7.2-g Establish methods for inducing storefront rehabilitation and seismic upgrading of unsafe structures.

The Redevelopment Agency created the Façade Improvement Program in 1994 to entice business and property owners to upgrade downtown storefronts. This program continues to be successful in inducing storefront rehabilitation in the downtown area.

7.2-h Establish a street tree-planting program.

The 1999-2000 Downtown Master Plan implementation involves planting trees in the streets and parking lot areas. The Downtown Property and Business Improvement District is the responsible entity for the maintenance and upkeep of the newly planted trees.

7.2-i As part of the Downtown implementation program, underground overhead utilities where feasible.

While this implementation policy was well intended and would contribute to improving the downtown aesthetics, the cost associated with undergrounding all existing utilities far exceeded the budgetary constraints placed on the Downtown Revitalization project. Most of the overhead utilities are along the alleys.

7.2-j As part of the Capital Improvement Plan, protect and maintain old street lights along North Broadway and other routes, through repair, consolidation and replacement with replicas, despite the fact that replacement with conventional fixtures may be less expensive.

New lighting fixtures were installed in both the parking lots and on Main Street during the implementation of the 1999-2000 Downtown improvement project. The style, color and quality closely match those along North Broadway and other routes downtown. Maintenance of these lighting fixtures will fall under the responsibility of the Downtown PBID.

7.2-k Prevent large concentrations of commercial and office uses within neighborhood centers outside Downtown.

Neighborhood Design policies restrict the amount of development that can be accommodated in the new neighborhood centers.

7.2-l Improve access to and within Downtown. Issues addressed should include entrances to Downtown and signage.

For detailed policies refer to the Downtown Master Plan.

7.2-m Direct Downtown expansion southward.

Growth in population and the desire of several service-commercial and industrial operations to move elsewhere presents an opportunity to expand Downtown to increase accessibility from the

south and serve as a link between the north and south parts of the City.

7.2-n Facilitate and encourage development of mixed-use projects in Downtown.

Current zoning regulations limit building heights in Downtown to 70 feet or to six stories, whichever is less. The latter should be replaced with a 3.0 FAR standard, which will permit greater flexibility in the design and mix of uses. Residential development should continue to be permitted in Downtown.

The proposed new Downtown Commercial/Residential land use designation encourages residential development in Downtown.

7.2-o Preserve residential areas north and east of Downtown.

These areas are well established and contribute to the diversity of scale and use near Downtown. Permitting non-residential uses will create pressure on surrounding residences to convert to other uses as well. Current zoning will need to be modified to reflect the Plan.

7.3 NEIGHBORHOOD DESIGN

Turlock has a rich variety of neighborhoods and housing types, ranging from older, established ones with traditional layouts and mature landscapes, to emerging ones at the edge of the City.

EARLY NEIGHBORHOODS

Turlock's older areas are close to Downtown. Most are within one-half mile or about 10 minutes on foot. These areas are marked by a continuous fine-grained orthogonal street pattern, with houses fronting on east-west streets.

Early residential development in the City is typified by the area between Berkeley Avenue, Canal Drive, Minaret Avenue and East Avenue. Streets are lined with tall large-canopy trees providing shade and a sense of enclosure. A typical block is about 400 feet x 320 feet, and the average lot is narrow and long — 50-foot wide and 150-foot deep (about 7,500 square foot lots). Residential densities in the area generally range from 4 to 5.5

units per gross acre, with streets and public rights-of-way accounting for about 12 percent of the total area. Parking access is provided from the rear via alleys that run through the block, which effectively provide a pedestrian/bicycle connection every 175 feet or so.

The overall block pattern in the older residential areas of the southwest part of the City is very similar, but densities are somewhat higher. Variation in lot size and housing type is also greater.

CONTEMPORARY NEIGHBORHOODS

The historic pattern of continuous and shaded streets, mid-block alleys and rear-accessed garages was gradually replaced, initially by "front-accessed" garages in the late 1950s and 1960s, and later by developments in the 1970s that did without the alleys altogether. Townhomes and apartments were first introduced around 1970; the two largest developments were built in the early 1990's.

In the 1980's and early 1990's, subdivisions and residential projects in Turlock are generally unsuccessful in addressing the relationships between adjoining residences and of dwellings to public spaces. Many have perimeters defined by sound walls or parking drives and introverted streets terminating in cul-de-sacs. Streets, both internal and public, are often lined with garages or parking, both in single-family and apartment developments. This pattern of development is most evident in the northeast, an area that has seen much recent growth, but can also be found in many other parts of the City. Many new neighborhoods also lack proximity to convenience shopping, neighborhood services and parks.

As a result of the introverted nature of the new residential neighborhoods, use of public spaces is often limited to adjoining residences; an example is Bristol Park on Castleview Drive. Streets lined with garages lack the visual engagement and security provided when living areas directly face yards, sidewalks and streets. Wide and unshaded streets with few interconnections are likely to discourage pedestrians and bicyclists.

Density of Recent Subdivisions. The average density for subdivisions approved in the 1990's ranges from 3.8 to 4.7 lots per gross acre. Variation in density and the resultant diversity in housing type and size among recent subdivisions are quite small. Few developments approved are at a density greater than 6 lots per gross acre, and higher density developments are generally on infill sites smaller than 5 acres in size.

Apartment Density. Average net density for apartment projects is about 20.5 units per acre. While a 15-year-old development has a density as high as 37 units per net acre, most recent developments have been closer to about 20 units per net acre.

HISTORIC AND CONTEMPORARY PATTERNS COMPARED

The resurgent interest in the traditional development pattern of deep and narrow lots with rear garages, and the current demand for small-lot residences (for details see Housing Element), calls for an examination of its relative benefits. This historic pattern offers distinct advantages over typical contemporary subdivisions:

- A more public orientation. Streets are fronted by living spaces instead of garages, providing greater visual interest, better sense of community, safer sidewalks, and larger viewing distances from living spaces.
- The absence of curb-cuts allows uninterrupted tree-planting and increased space for on-street parking.
- The lack of driveways results in larger front yards.
- Deep lots allow location of quieter indoor spaces at a greater distance from through traffic than is achievable in shallower lots.
- Narrow lots can be serviced more efficiently resulting in lower improvement costs.

Gross residential densities achieved in the historic and contemporary subdivisions tend to be quite comparable. However, the advantages of narrow lots, especially small ones, are quickly lost if they are fronted by two- or three-car garages that occupy almost the entire street-frontage.

NEIGHBORHOOD DEVELOPMENT

The General Plan depicts residential growth in the form of neighborhoods. The neighborhoods are planned to contain a mix of uses and housing types and to provide convenient access to commercial and service functions used on a frequent basis. They will be integrated with the existing urban development and provide a continuity of street network.

The neighborhoods will have fairly loose edges but well-defined centers. They are sized to accommodate existing urban development and access

conditions. At currently designated residential densities, an average-sized neighborhood will accommodate about 4,000 to 4,250 units, or about 11,600 to 12,300 residents — enough to support a neighborhood retail center. (See Table 7.3-A.)

TABLE 7.3-A: TYPICAL NEIGHBORHOOD BUILDOUT

	RESIDENTIAL (housing units)				NON-RESIDENTIAL (thousands of square feet)		
	Low Density	Medium Density	High Density	TOTAL	Office	Community Commercial	TOTAL
Inner Core	0	260	490	750	80	120	200
Outer Core	120	300	0	420	0	0	0
Periphery	3,060	0	0	3,060	0	0	0
TOTAL	**3,180**	**560**	**490**	**4,230**	**80**	**120**	**200**

Neighborhood population @ 2.9 persons per housing unit: 12,300
Note: Buildout estimate does not include higher intensities allowed for vertical mix of land uses. (See Table 7.3-C).
Source: Blayney Dyett Greenberg.

Neighborhood Centers. The centers will contain a mix of uses and intensities that will provide focus and a sense of community to the neighborhoods. They are designed to encourage walking but are located to be easily accessible from arterial streets. Centers consist of an inner core (Figure 7–1), generally stretching one-quarter mile in either direction along the center's principal streets, and an outer core consisting of the remaining area within a one-quarter mile radius from the intersection of the two principal streets.

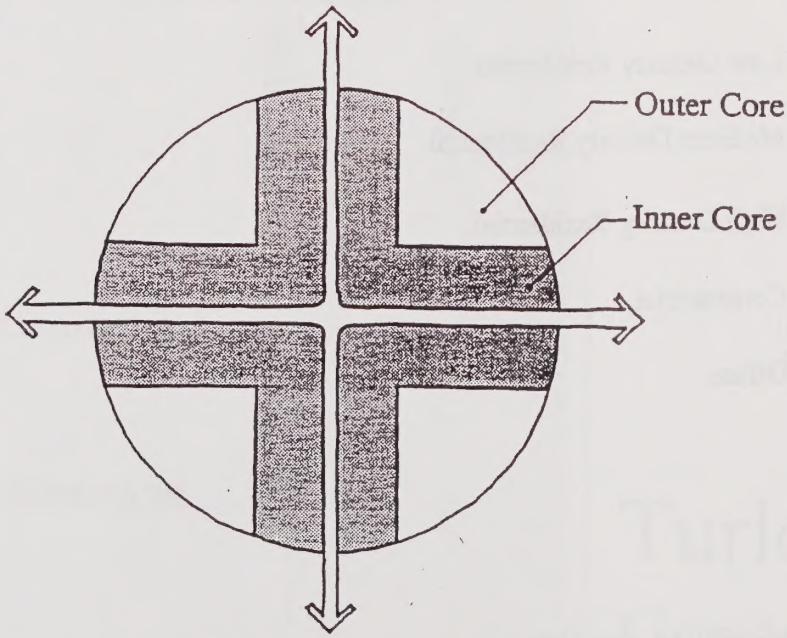
The inner core will contain retail, neighborhood services and higher density housing. (See Figure 7-2.) A horizontal mix of uses is permitted and a vertical mix is encouraged. (See Policy 7.3-f.) Development will be required to have a public orientation. (See Policy 7.3-i.) An average 10-acre (approximately 110,000 square feet of building area at 0.25 F.A.R.) size retail center will be anchored by a supermarket and/or a drugstore and will contain a variety of other smaller tenants, such as video stores, bakeries and restaurants. Neighborhood service functions will include medical, dental and real estate offices. The outer core will contain a mix of Medium and Low-Density residences. Figure 7-3 depicts the location of the four new neighborhood centers proposed by the Plan.

Housing Type and Mix. Housing types and densities are arranged to locate the greatest number of residents close to the center. In a typical neighborhood, about 40 percent of the residences, including almost all of the High-Density residences will be within a 1/4-mile distance of the retail

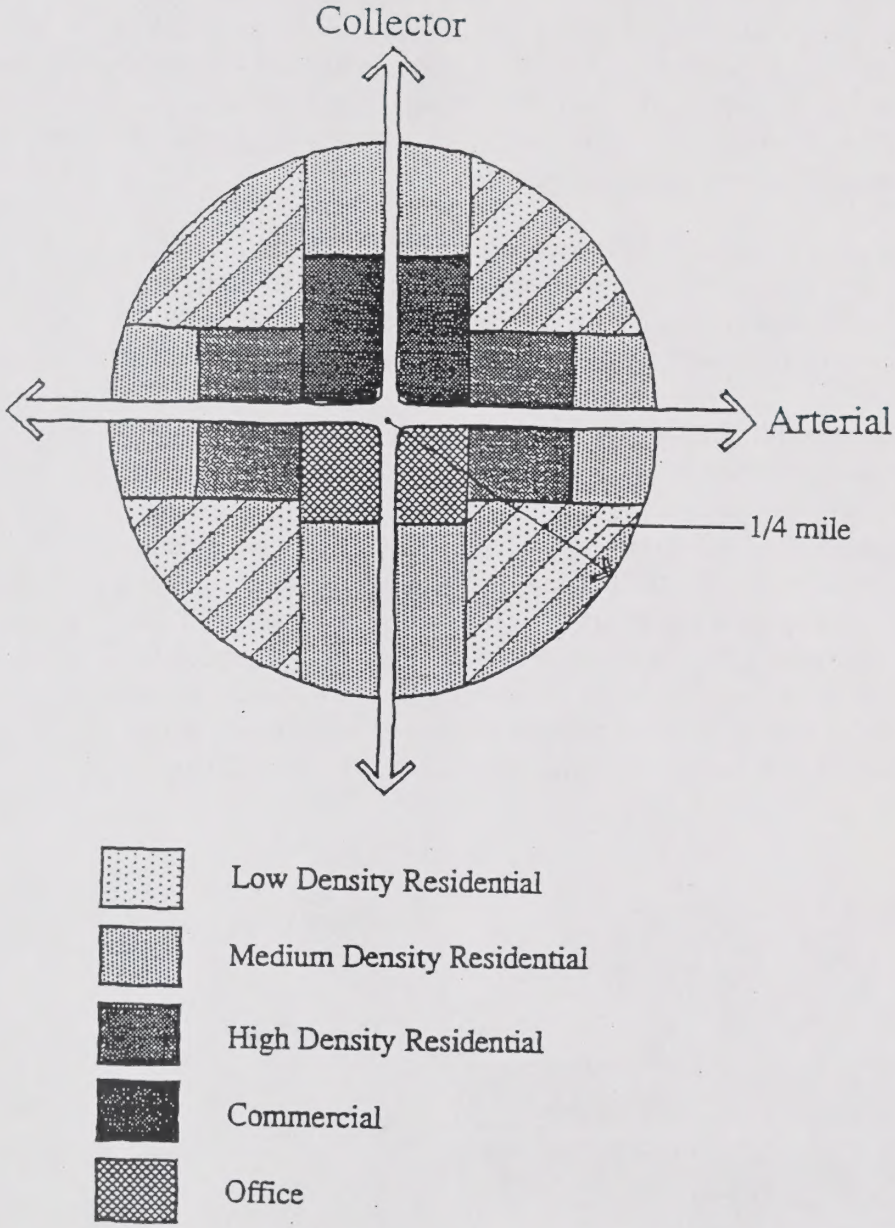
core. The 1/4-mile distance represents an average five-minute walking trip. The remaining High Density residences will be located surrounding community parks. In comparison, if the different housing types were to be evenly distributed throughout the neighborhood, only about 18 percent of the residences would be within the ¼ mile walking radius. Figure 7-4 illustrates examples of housing types that meet the density stipulations of the different General Plan residential designations.

Parks. Each neighborhood will have two or three neighborhood parks. Large community parks will be shared between the different neighborhoods. Bikeways and pedestrian paths connecting the neighborhoods to other parts of the City will also be provided.

Reduction of Automobile Dependence. The proximity of residences to shops and services will reduce the number of shopping-related automobile trips as well as decrease the average trip-length. Buildings with a street orientation will enrich the pedestrian experience. Though some residents of one neighborhood will choose to shop and use services in another, higher intensity development closer to the centers will provide residents with the choice of walking to shops and services. This should especially be helpful to those who do not own or drive automobiles — such as the youth and many of the elderly. Also, policies in Section 7.4: Street Design and Connectivity will help reduce the length of intra-neighborhood trips.



Neighborhood Center: Inner Core and Outer Core
Figure 7-1



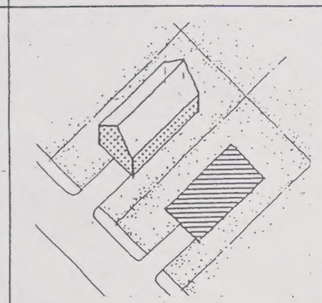
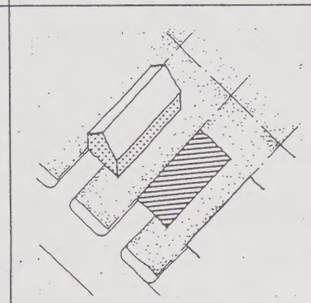
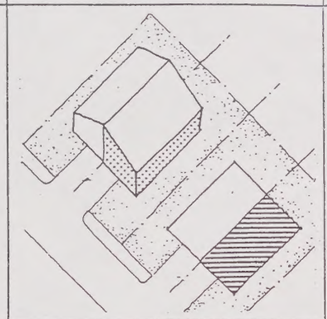
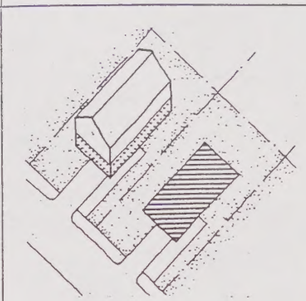
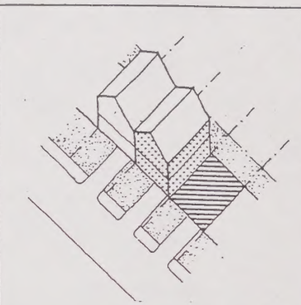
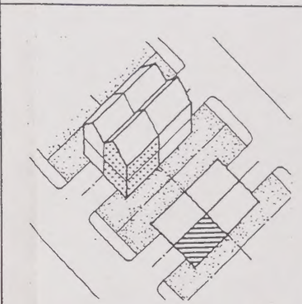
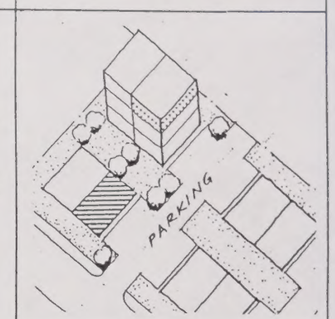
Neighborhood Center: Diagrammatic Land Use
Figure 7-2

Location of Proposed New Neighborhood Centers

Figure 7-3

Turlock
General Plan

City of Turlock, Planning Division
Updated January, 2002

	Detached	Detached Zero Lot Line	Semi-Detached	Duplex	Townhouse	Back-to-Back Semi-Detached	Garden Apartment
Unit and Lot Configuration							
Lot Size	4,500 s.f. approx. minimum	3,500-5,000 s.f. 40-50 ft. frontage	3,000 - 4,000 s.f. 35-50 ft. frontage	4,000 - 5,000 s.f. minimum	2,000 - 3,000 s.f. 30-40 ft. frontage	1,600 - 3,000 s.f.	Consolidated; dwellings not on individual lots
Dwelling Size	2,000 - 3,000 s.f.	1,500 - 2,500 s.f.	1,500 - 2,500 s.f.	1,000 - 1,500 s.f.	1,100 - 2,000 s.f.	1,000 - 2,000 s.f.	900 - 2,000 s.f. on one or two levels
Building Floors	1 or 2	1 or 2	1 or 2	2	2	2	2 or 3 plus parking
Parking	Attached or Detached	Attached or Detached	Attached or Detached	Attached or Detached	Attached or Clustered	Attached or Clustered	Clustered
Typical Density Range (units/gross acre)	Up to 7	7 - 10	8 - 12	7 - 14	10 - 20	12 - 20	20- 45
General Plan Residential Land Use Classification	Low Density	Medium Density	Medium Density	Medium Density	Medium/High Density	Medium/High Density	High Density

Turlock
GENERAL PLAN

Illustrative Housing Types

Figure 7-4

Design principles to guide development in the neighborhood centers are elucidated in Section 7.7.

Guiding Policies

7.3-a Encourage new residential growth in the form of neighborhoods.

The Plan proposes a major portion of residential growth in neighborhoods — areas that share a common identity — with loosely defined edges but a well-defined core or center.

7.3-b Provide for development of neighborhood centers.

Centers are concentrations of activity and uses that serve a neighborhood function. While the location and size of centers is motivated by considerations of proximity and walking distances, the principal purpose is to provide focus and a sense of community to the neighborhoods.

7.3-c Require diversity of housing types in each neighborhood and a mix of uses in the neighborhood centers.

Figure 7–4, Illustrative Housing Types, illustrates the range of possible housing types for the different residential designations in the Plan.

7.3-d Preserve the scale and character of established neighborhoods.

With ample room for expansion, there is a need to preserve established neighborhoods that have historic value or contribute to the character of the City.

7.3-e Improve the community orientation of new residential developments.

A community orientation calls for greater attention to the relationship between residences and shared spaces and does not require sacrifice of privacy or amenities.

Implementing Policies

7.3-f Through the process of project approval, ensure that a mix of uses, as described in Table 7.3–B, and illustrated on the Plan Diagram, is maintained in the neighborhood centers. Development of a neighborhood center, or part thereof, consistent with the uses, mix

and intensities illustrated on the Plan, will be required as a condition of subdivision approval for any development on property on which the center is located.

The intent is to ensure both the provision of non-residential uses as well as a phasing of uses.

The Diagram represents a schematic arrangement of land uses in the neighborhood centers. The centers consist of an "inner core" stretching 1/4 mile along the two principal arterials from the center, and an "outer core" consisting of the remaining area within a 1/4 mile radius.

TABLE 7.3-B
USES PERMITTED IN INNTER AND OUTER CORES

	Inner Core		Outer Core	
Land Use	**Permitted?**	**Location and Area Restrictions**	**Permitted?**	**Location and Area Restrictions**
Residential				
High Density	Yes	None	No	NA
Medium Density	Yes	None	Yes[2]	None
Low Density	No	NA	Yes[2]	None
Neighborhood Commercial	Yes	Along one collector street in each center only; none along any arterial or expressway. All retail to be contiguous. 8 – 12 acres in size.	No[1]	NA
Office (Neighborhood-serving only)	Yes	None 3 – 6 acres in size.	No	NA

[1]Except for stores that are permitted in all residential areas, and which do not exceed 2.500 s.f. in size.
[2]Mix of Low and medium Density dwellings required.

Source: Blayney Dyett Greenberg.

7.3-g Permit as-of-right a mix of uses on individual properties in the form of multi-use developments as depicted on the Plan or mixed-use developments as shown on Table 7.3–C.

The Zoning Ordinance will need to be amended. Multi-use developments can result in a "horizontal mix", or multiple uses over small areas, if different single uses are located in close proximity to one another. Mixed-use developments, on the other hand, have a "vertical mix" of uses on individual properties. Mixed-use development standards may be defined through the area-wide planning process as territory is annexed to the City of Turlock.

TABLE 7.3-C
INTENSITIES AND MIX OF USES IN NEIGHBORHOOD INNER CORES

Plan Designation	Permitted Uses		
	Residential	Office	Commercial
Community Commercial	10 units/gross acre. None on the first floor.	0.2 FAR None on the first floor	0.3 FAR
Office	10 units/gross acre. None on the first floor	0/35 FAR	—
High Density Residential	15-25 units/gross acre	—	—
Medium Density Residential	7-15 units/gross acre	—	—

Note: The shaded area represents development allowed in addition to the base designation to encourage a vertical mix of uses.

Source: Blayney Dyett Greenberg.

7.3-h Encourage individuals or groups of property owners to develop detailed specific plans and master plans for the neighborhood centers to meet the objectives of the Plan.

Through the efforts of property owners to develop required specific plans and master plans, the objectives of the General Plan can also be met by conformance of individual projects with the principles established in Table 7.3-C.

7.3-i Ensure that development in the new neighborhoods is in accordance with the design principles established in Section 7.7 and any subsequent guidelines that may be established.

7.4 STREET DESIGN AND CONNECTIVITY

The grid pattern of streets and short blocks in the older parts of the City permit freedom of movement, ease of access and a sharing of through-traffic between many routes. In contrast, while the superblock and cul-de-sac nature of development in many newer parts of the City creates quiet enclaves and smoother traffic flow along the arterials, it also creates inward-looking neighborhoods, limits movement choice and results in increased traffic volumes on a limited number of streets, requiring mitigation measures such as sound walls. Development is needed that balances the efficiency and traffic flow capabilities found in the newer parts of the town with the sense of proximity and ease of access that results from the older pattern.

Well-designed and landscaped streets are not only an aesthetic delight, but in a Valley town like Turlock, they are essential to shade streets, sidewalks and yards during the hot summer periods. Trees and shrubs can also help break winds, filter pollutants, buffer sidewalks and bikeways form traffic, screen noise walls and parking, storage, and service areas, and reduce the perceived intensity of development. Thoughtfully designed City entrances and gateway zones can help evoke a sense of arrival for both residents and visitors.

Guiding Policies

7.4-a Continue expansion of the present street network in an orthogonal grid for all arterial and collector streets.

The grid pattern allows for ease of future expansion, flexibility in street layout and adequate variation in lot-size and is well-suited for Turlock's flat topography.

7.4-b Through circulation network and street design, reduce the perceived separation and introverted nature of projects.

7.4-c Through streetscape improvements, make the entryway portions of Golden State Boulevard shaded, tree-lined spines of the community.

7.4-d Enhance the visual attractiveness of the community by providing attractive streetscapes, particularly along major expressways, arterials and collector streets.

Implementing Policies

Street Connectivity

7.4-e As a condition of project approval, require circulation patterns of all residential and neighborhood commercial projects to conform to *maximum* spacing between through- streets[2] (exclusive of alleys), as set forth in Table 7.4-A and depicted in Figure 7-5, unless access conditions and standards prevent their attainment.

The maximum attainable size of a "block" is thus limited to 660 feet by 880 feet where parcels adjoin two arterials, with the longer side facing north and south. While it is still possible to locate residences on cul-de-sacs, these are generally discouraged.

These standards are much less exacting than street spacing in the older parts of the City. The intent is to prevent development of introverted neighborhoods, provide flexibility in circulation, and promote access for bicyclists and pedestrians.

Figure 7–6 shows examples of the types of developments that will and will not meet spacing standards.

TABLE 7.4-A
MAXIMUM PERMITTED SPACING BETWEEN THROUGH-STREETS (Center to Center, in feet)

When intersecting a(n)	Street Orientation	
	North-South	East-West
Arterial	880	660
Major/Minor Collector	660	440

Note: Expressways, arterials, and collector streets are to be in accordance with the depiction on the Plan Diagram. Intersection design should be governed by criteria in Table 5.2-A

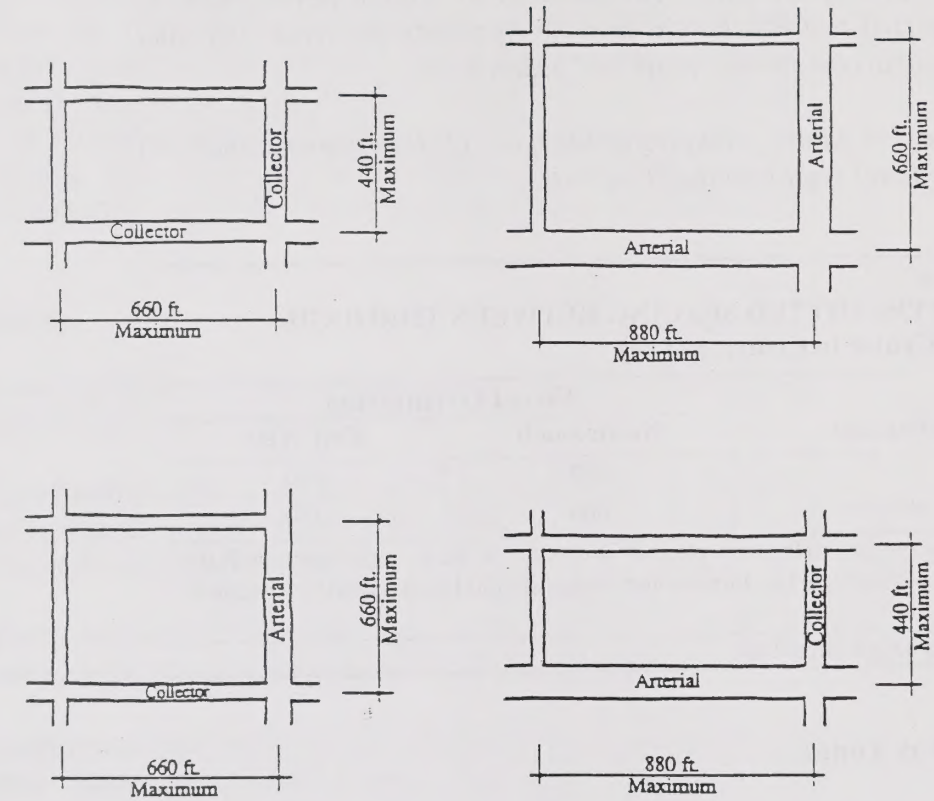
Source: Blayney Dyett Greenberg.

Gateway Zones

7.4-f Designate the principal access points to Turlock which warrant special treatment and development review considerations as "Gateway Zones." These entrances, including West Monte Vista Avenue, Golden State Boulevard, West Main Street, Fulkerth Road, and Lander Avenue, can provide important "gateway" functions as distinct visual entryways. The road segments should receive special landscape treatments to create impressionable and coordinated entries.

7.4-g Use overlay zoning to implement specific entranceway design and landscaping goals along designated Gateway Routes.

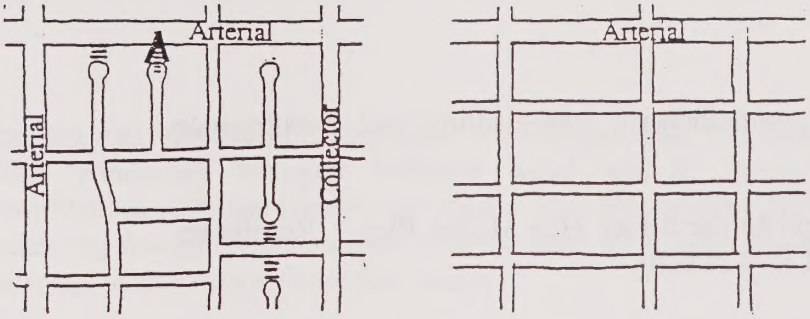
7.4-h Subject all development projects and capital improvements within view of a designated Gateway Route to mandatory design review procedures.



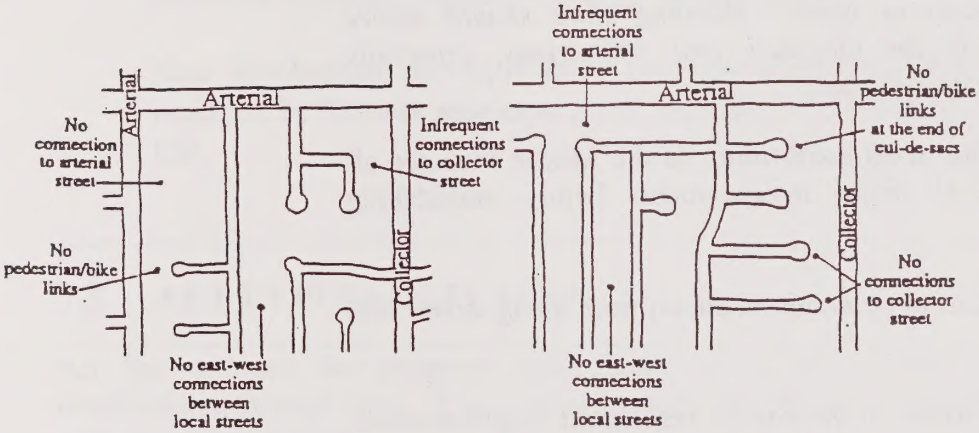
North

Local Street Spacing Standards
Figure 7-5

Note: Street spacing standards vary with both orientation and street classification.



Permitted



Not Permitted

North

Local Street Configurations: Permitted and Not Permitted
Figure 7-6

Streetscape Design

7.4-i As part of the comprehensive tree-planting and maintenance program:

- Periodically update the Street Tree Master Plan. (Resolution 88-130 of the City Council).

  See also policies in Section 6.4: Energy Conservation.

  The Master Plan should be reviewed and updated to include the new streets and improvements proposed by the General Plan. It should also consider planting along the median for all streets four lanes or wider. Planting plans should ensure adequate shade for bicyclists and pedestrians, especially during the summer months.

- Prepare planting plans conforming to the Master Plan for all new streets and major improvements before undertaking construction.

- Adopt a program to plant and maintain trees along streets that lack them.

  In stark comparison to the earlier residential neighborhoods, any newer parts of the City are devoid of any trees.

- Continue to implement the tree-preservation ordinance to allow removal of mature trees within public rights-of-way only when they become a safety hazard.

- Establish maintenance districts for the upkeep of trees and landscape buffer areas required along public rights-of-way.

- Prepare planting plans and implementation programs for designated "Gateway Zones."

- Use changes in tree species, scale, color and spacing to define neighborhoods and articulate the designated hierarchy of expressway, arterial, collector, and local streets.

7.4-j Include street trees as part of Capital Improvement Program programming and implementation.

7.4-k Prepare and implement a landscape and signage plan for Golden State Boulevard between Fulkerth Road and F Street in coordination with the Downtown Master Plan Design Guidelines, balancing design considerations with the need for Golden State to be retained as a major circulation route.

The design challenge will be to give the strip shade, character, and a sense of enclosure without sacrificing the ease of access.

7.4-l Require undergrounding of utility lines in new developments, including existing distribution lines on frontage streets.

New development is required to underground utility lines as required by Turlock Municipal Code Sections 9-2-121 and 11-8-107.

7.5 ART IN PUBLIC PLACES

Art has outlined the progress, vision and values of cultures and communities through time. It is a tangible record of people's interaction with their surroundings.

Historically, Public Art gives identity and dimension, revitalizes communities both psychologically and economically, and makes cities more human. Providing for art in public places assures that the city recognizes its commitment to the physical image of the community and the dignity of life.

The realm of Public Art is broad and can cover the gamut from objects such as sculptures, paintings and murals, to exterior treatment of walls or amendments to landscape design such as fountains, benches or lights. Provision will be made for attention to already constructed sites in need of qualitative improvements, and of support for the performing and musical arts.

The City establishes policies ensuring the provision and incorporation for art in all public building plans. These programs are intended to enhance the environment, provide aesthetic and creative solutions to spaces accessible to the public, and enrich the lives of Turlock citizens through the stimulating ideas of contemporary artists.

Guiding Policies

7.5-a Increase public access to works of art to promote understanding and awareness of the visual arts in the public environment.

7.5-b Provide guidance to municipal agencies, developers, and community members and organizations regarding the incorporation of art within the City.

7.5-c Generate appreciation for the arts and promote involvement of community members through public art programs.

7.5-d Offer direction and support to the Turlock Arts Commission for the development of a percent for art program.

Implementing Policies

7.5-e Arts selection committees, procedures, guidelines, and evaluation will be outlined and overseen by the Turlock City Arts Commission with approval of our City Council.

7.5-f Establish methods to assure public and private developers include public art and cultural programs within adjacent areas within the City (i.e., incentive zoning, public art mandates).

7.5-g Support and encourage art-related events and productions within the community.

7.5-h Develop guidelines to assist the Community Arts Commission with the promotion of art in public places.

7.5-i Assure the highest quality art and support the concept of fine art by selecting qualified professional artists to participate in our community arts programs.

7.5-j Develop a diverse fine arts program that involves community members in a broad range of art-related programs and activities. Such programs could include: interaction between artists and community members; effective use of the media; artist-in-residence programs; and special events including but not limited to exhibitions, public art tours, school programs, and publications.

7.6 HISTORIC PRESERVATION

Most structures with historic significance are located in Downtown. While no formal surveys relating to historic structures in the City have been performed, a committee on revitalizing Downtown is now investigating the historic attributes of Downtown.

As part of the next phase of the Downtown Master Plan, establishment of a historic district within the Master Plan boundaries will be considered. The older, historic buildings in the "historic district" would be certified for tax breaks if owners will take responsibility for rehabilitating the buildings.

Considering the lack of a museum or any repository of local artifacts, and that many long term residents are now of an age when they are breaking up their personal collections - thereby endangering their existence, the Turlock City Arts Commission is reviewing the possibility of developing such a depository.

Guiding Policy

7.6-a Integrate historic preservation into planning for Downtown and other areas with historic significance.

Implementing Policies

7.6-b Identify and adopt an Historic Preservation District as part of the next phase of the Downtown Master Plan.

7.6-c Form an historic preservation committee in accordance with State Certified Local Government guidelines which would review structures of historic merit as well as various collections and seek methods to preserve them.

See also policy regarding Carnegie Library in Section 7.2.

7.7 URBAN DESIGN PRINCIPLES

Thoughtful design, community orientation, and consideration of issues broader than the immediate are essential to creating pleasant and successful communities. Shared objectives and agreed-upon design principles can help direct individual efforts towards a larger whole — public spaces and sidewalks that are delightful to be in, buildings that respect neighbors, streets that are shaded and safe to use, and development integrated with the surroundings rather than cut-off from them. Urban design principles and policies are interspersed throughout this and several other elements; this section supplements them and provides an overall reference point for project design and review. Policies outlined below can also be used to prepare detailed design guidelines at a later date.

Guiding Policies

7.7-a Prepare and adopt design guidelines that address the variety of urban design issues for which the General Plan establishes policies. Subject all projects, except single units on existing parcels, to a design and site plan review that may be conducted by City staff.

Design Guidelines were adopted in 1997 as part of the Zoning Ordinance update.

7.7-b Provide a community and public orientation for all development.

7.7-c Accommodate the needs of all pedestrians, bicyclists and wheelchair-dependent persons.

7.7-d Establish new neighborhood centers as high-quality mixed-use pedestrian-friendly environments, without excluding the automobile.

Design emphasis should be on providing a fine-grained environment accommodating transit and pedestrian comfort and convenience.

7.7-e Require buildings to be scaled to a neighborhood character and designed to encourage pedestrian activity and comfort.

7.7-f Ensure that each neighborhood center contains a mix of uses and provides transit stops in proximity to residences.

7.7-g Require all development in the designated Business Park to be of a standard associated with a high-quality office complex.

Implementing Policies

Neighborhood Design: <u>All Uses</u>

7.7-h Ensure that new development facilitates access, is oriented to streets and public spaces and is integrated with the surroundings.

- Where connections to other roads are feasible, use of dead-end streets is discouraged.
- Gated projects restricting public access should not be permitted, unless designed in accordance with adopted standards for private residential communities.
- Project edges should be designed to facilitate integration with the surroundings.
- Sound walls should be used only along designated freeways, expressways and arterials if needed, and should be completely screened from the outside by shrubs and trees located within the project property. Alternatives to sound walls, such as landscaped frontage roads, are encouraged where feasible.
- "Dead" uses, such as storage, parking lots, garages, and service areas should be located away from public streets and off-site view. Alleys should be used to access parking and service uses where feasible.
- Corner lots should locate access driveways on the street with the least traffic volume.
- Buildings should be oriented to streets and public spaces; inward looking developments are discouraged.

7.7-i Require new projects to facilitate pedestrian and bicycle movement and aid transit.

- Planning should anticipate and provide for future local transit service even if the service is not feasible at the time of project plan preparation.

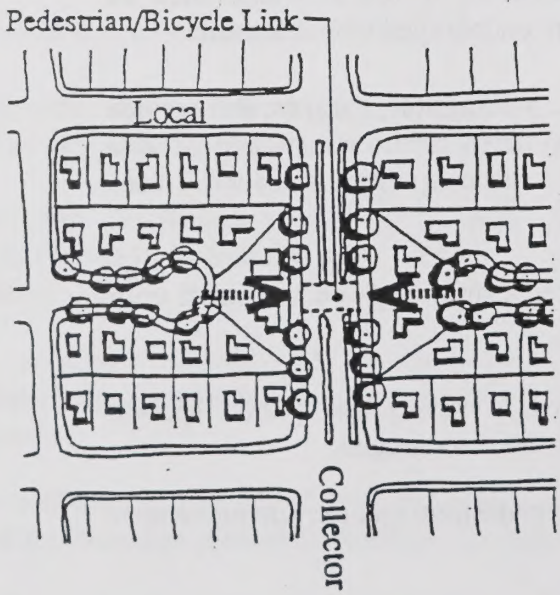
- Development should not be at intensities below the ranges stipulated in the General Plan.

- Bikeways should be provided as designated in General Plan Figure 5-2.

- Pedestrian and bicycle connections to through-streets should be provided at the end of cul-de-sacs. (See Figure 7-7.)

- Trees and shrubs along streets should buffer sidewalks and bicycle lanes from automobiles and be selected and spaced to provide uninterrupted shade to pedestrians and bicyclists.

- Large-size projects in neighborhoods should be broken down by providing through-streets and designing smaller units to provide individuality and distinction.



Pedestrian/Bicycle Links
Figure 7-7

Neighborhood Centers: Streets and Access

7.7-j Provide a fine-grained urban environment with streets and sidewalks sized and designed to promote outdoor use and walking.

- Provide a network of closely spaced streets, no more than 400 feet apart in the neighborhood centers. Intersections should be consistent with the access standards established in Table 5.2-A of the Plan.

- Provide sidewalks along all streets, public and private, except along alleys. Sidewalk width, including a curbside planting area for street trees, should be at least 15 feet along retail/professional office areas and 10 feet elsewhere in the neighborhood centers. Street trees should be planted at a maximum interval of 30 feet.

- Keep the number of private driveways and curbcuts along principal streets to a minimum.

- Cul-de-sacs, where connection to other streets is feasible, are not permitted.

- No sound walls shall be used in the neighborhood centers.

Neighborhood Centers: Parking

7.7-k Ensure that parking areas do not impede pedestrian access and are adequately shaded and screened.

- Parking or service areas, screened or otherwise, should not be located between sidewalks and buildings. Pedestrians should not have to walk through or along a parking lot to access any building in a neighborhood center, but should be provided with independent sidewalk access.

- Screen all off-street parking, surface or structured, from pedestrian view by trees and shrubs. Walls should not be used as screening devices.

- Provide at least one large-canopy tree per two parking spaces and/or other paved area to shade cars, reduce glare and screen barren lots.

Neighborhood Centers: Retail Location

7.7-l Ensure that all retail in a neighborhood center is contiguous and along streets pedestrians can cross safely and without unduly impeding traffic.

- Neighborhood retail, shown as Community Commercial on the General Plan Diagram at the intersection of two principal streets, should be oriented to front along the street expected to carry the lesser amount of traffic, and located only on one side of the other principal street.

- When neighborhood retail abuts lands designated as Low Density Residential, special consideration should be given to techniques that properly buffer each use from the other.

Neighborhood Centers: Design of Structures

7.7-m Require buildings to define street and sidewalk edges, provide scale to streets, engage pedestrians and promote active use of sidewalks and outdoor space.

- All structures with non-residential uses at the ground level should be built to provide a continuous frontage along public rights-of-way.

- Buildings should be set back from sidewalks only if a pedestrian plaza or patio, not separated from a sidewalk by a wall, fence, shrubs etc., is provided.

- Frequent entrances to buildings are desirable. Entrances to the rear of buildings from parking courts should not substitute for entrance(s) from a street.

- Blank walls, reflective glass and other opaque surfaces at the ground level along street frontages should be avoided. Store interiors should be visible from the outside.

- Overhangs, awnings or other devices to shade the sidewalks of building frontage are to be provided. Colonnaded walkways, where provided, should be at least 8- feet wide clear, and run the entire length of a block, or store front.

- Buildings should be fine-grained and not appear to be large and monolithic. Individual buildings should generally be no larger than 50,000 square feet in size, both to provide a small-scale appearance and to prevent location of activities that would more appropriately belong in Downtown or elsewhere.

- Diversity in scale, material, color and use is encouraged.

Neighborhood Centers: Uses and Intensities

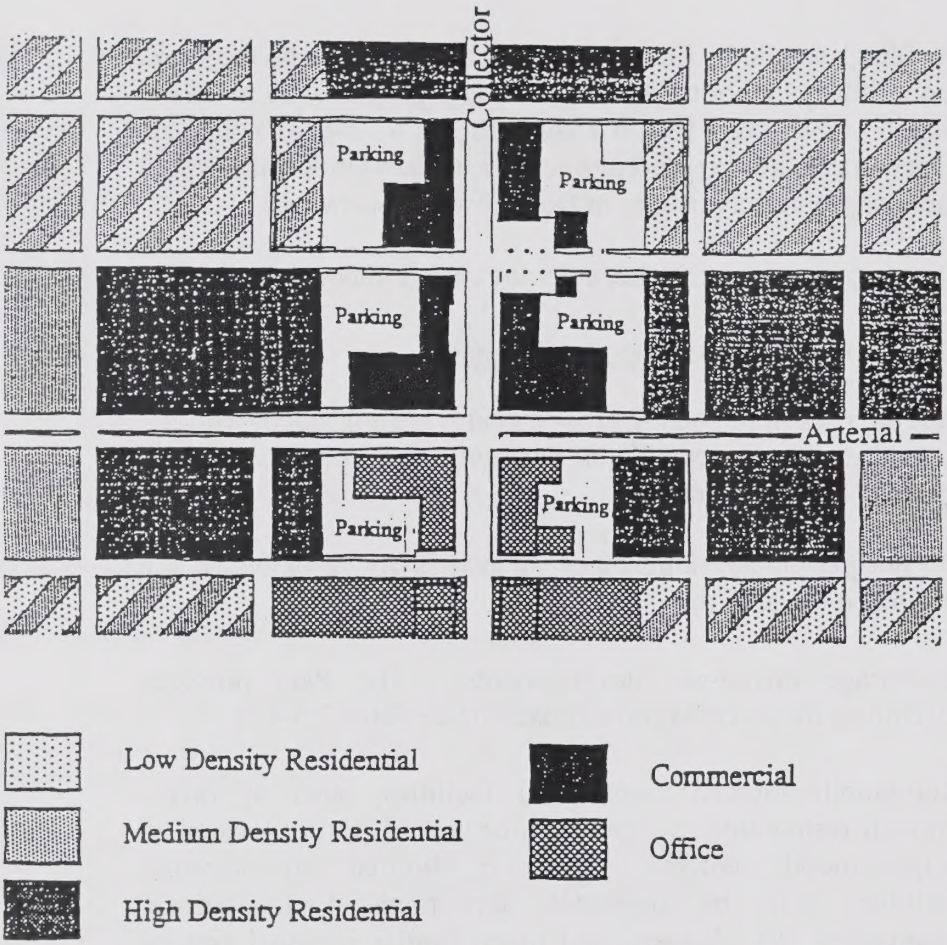
7.7-n Ensure that uses in the neighborhood center are consistent with the depiction in the General Plan Diagram and compatible with neighborhood use and scale.

- Do not permit development at intensities above or below the stipulated range in the Plan.

- Encourage mixed-use developments. The Plan provides incentives for a vertical mix of uses. (See Table 7.3–C.)

- Automobile-oriented commercial facilities, such as drive-through restaurants and gas stations should not be located in neighborhood centers. However, limited drive-through facilities may be permitted for financial institutions, pharmacies, dry cleaners, and other similar personal service facilities. The appropriate location for automobile-oriented facilities is in areas designated Heavy Commercial on the General Plan Diagram, not in neighborhood centers.

Figure 7-8 illustrates the development pattern of a neighborhood center that could result from application of design principles established in this section.



Neighborhood Center: Illustrative Development Plan
Figure 7-8

Housing Outside Neighborhood Centers: <u>Design Principles</u>

7.7-o Residential projects, single-family or multi-family, should include visual interest and variety. The size, scale, proportion, color, placement, and detailing of architectural features should be carefully considered to complement the overall massing and scale of the single-family or multi-family building. Mutli-family projects should be designed and detailed to be compatible with neighboring single family homes and commercial centers. Single-family projects should include architecture and landscaping that is complimentary and creates a neighborhood identity with visual interest and variety.

Housing Outside Neighborhood Centers: Streets and Access

7.7-p Ensure that streets are provided consistent with the provisions of the Plan.

- Arterial and collector streets are depicted on the General Plan Diagram. Local streets should meet spacing requirements for through-streets stipulated in Section 7.4. (See Table 7.4-A.) Intersections design should be in accordance with access standards established in Table 5.2–A. Requirements for dedicated through-streets apply to all multifamily and single-family projects.

7.7–q Develop clear pedestrian linkages between and within neighborhoods.

- Each project application should demonstrate connections from the project to the bikeways system depicted in Figure 5–2.

7.7–r Provide sidewalks consistent with intended use, and trees to shade streets and pedestrians.

- Sidewalks should be provided on both sides of all streets, public and private. Sidewalk width shall be a minimum of 5 feet. Explore the provision of curbside park/planting strips between the curb and sidewalks or move the pedestrian activity further from the travel way.

- In areas designated Very Low Density Residential, consider establishment of a more rural residential style of street-side public improvements.

- Street trees should be planted curb-adjacent and be consistent with the species stipulated in the Street Tree Master Plan and be no farther than 30 feet apart. Trees along local streets should be appropriately selected and planted no more than 30 feet apart.

Housing Outside Neighborhood Centers: Open Space

7.7–s Provide parks and open spaces consistent with the Plan.

- Parks should be sized and designed in accordance with criteria established in Section 4: Public Facilities and Services.

- Provide temporary and permanent urban-agricultural buffers in areas when required by Policy 7.1-k.

Housing Outside Neighborhood Centers: Parking and Garages

7.7–t Reduce the visual dominance of garages and parking.

- Garage width openings facing public streets will normally be limited to no more than 20 feet or one-third the lot width, whichever is less; recessed garages can be wider so long as the visible width from the front does not exceed the maximum. Alternatives to front garages, such as access from alleys, side drives with parking in the rear, and tandem parking are encouraged. Provision of alleys will not result in an overall reduction of development potential as Plan densities are stipulated in housing units per gross acre.

- Consolidated parking in higher density residential projects should be located away from the streets.

Additional Design Principles for Medium and High Density Residential: Public Orientation

7.7–u Development should be oriented to streets, sidewalks and public spaces; introverted projects are discouraged.

- Site planning and architectural design should ensure that developments provide street frontages with interest for both pedestrians and neighboring residents.

- Sites should not be fenced or walled off.

- Buildings should be oriented to public streets and each dwelling must have direct visual access to either a public sidewalk, landscaped courtyard or a garden space.

- Some dwellings on each site must front and face the adjoining public street and sidewalk.

- If entrance to individual buildings or dwellings is through a courtyard, the courtyard should open directly to a public street or sidewalk.

Additional Design Principles for Medium and High Density Residential: Fine-grained Development

7.7–v Promote fine-grained development that provides individuality and distinction. Projects should be integrated with surroundings, not closed off from them.

- Developments should generally be broken down into small clusters, independently accessible and integrated with the surroundings with direct circulation and visual connection between buildings, streets, sidewalks and open space. Superblock–style developments with large-scale internal circulation systems are discouraged.

- The number of units sharing a directly accessible building entrance or stairway should be limited to eight.

Additional Design Principles for Medium and High Density Residential: Business Park Design Principles

7.7–w Ensure that the Business Park is developed to high architectural and landscape standards and limited to non-polluting uses consistent with a Business Park setting.

- The primary intended use in Business Park is offices consistent with a light industrial nature (i.e., research and development). Light manufacturing, wholesaling, retailing and other uses should be permitted as ancillary uses only and should generally be limited to no more than 40 percent of the total building area of a development.

- Sidewalks with street-trees should be provided along all public and private streets. Sidewalk width, including a curbside planting area for street trees should be at least 10 feet. Street trees should be provided at a maximum 30-foot interval and placed to provide shade to pedestrians and bicyclists. Trees along median strips should also be provided for all streets 50 feet or wider.

- Planted building setbacks of 10 to 20 feet should be provided along public streets. No setback is required of structures that provide uses of pedestrian interest, such as a shop or a restaurant.

- Storage yards, parking areas, service areas, and other paved areas should be screened from off-site view by perimeter and tree-canopy planting.

- Large, flat-roofed areas and rooftop equipment should be screened from off-site views.

- Bicycle connections to designated routes should be provided from each development.

7.7-x Require large employment-generating developments to provide services such as restaurants, child care and business support that reduce the need for trips out of the Business Park.

Section 8
Noise Element

The concerns addressed explicitly in the Noise Element are also addressed, though perhaps less obviously, through the design of the land use and circulation pattern shown in the General Plan Diagram and discussed in other General Plan elements. The Noise Element's policies focus on noise reduction and control, while planning for minimizing noise in the Planning Area has been integrated throughout the General Plan.

The Noise Element reviews the properties of noise and noise impacts on people, identifies and appraises major noise sources in the Planning Area, maps projected levels of noise, evaluates the extent of noise problems in the community, and establishes policies related to noise. The Glossary defines technical terms that are not defined in the Noise Element text. The Noise Element follows State guidelines in the Government Code Section 65302(f) and Section 46050.1 of the Health and Safety Code. Additional information on noise measurements conducted as part of the General Plan program is included in the MEA.

8.1 PROPERTIES OF NOISE AND IMPACTS ON PEOPLE

"Sensitive receptors" is the term used to describe land uses characterized by activities that are easily disrupted by noise, or where persons of unusually high sensitivity live or spend time. All residences are considered sensitive receptors, as is the Emanuel Hospital and related medical uses, nursing homes and care centers, convalescent hospitals, and schools. Residential areas, the hospital, and schools are shown on the General Plan diagram. Nursing homes and care centers are not shown but are generally located within residential neighborhoods.

Noise has been defined as unwanted sound and is known to have numerous adverse effects on people. From those known effects of noise, criteria have been established to help protect the public health and safety and prevent disruption of certain human activities. These criteria are based on such known effects of noise on people as communication interference, sleep interference, physiological responses, and annoyance. Other types of effects, including hearing loss, do occur, but very rarely in relation to community noise, which is the focus of the Noise Element.

Communication interference. Communication interference is one of the primary concerns in environmental noise problems, and includes speech interference and interference of activities such as watching television. Normal conversational speech is in the range of 60 to 65 dB and any noise in this range or louder may interfere with speech.

Sleep interference. Sleep interference is a major concern in noise assessment and, of course, is most critical during nighttime hours. Sleep disturbance is one of the major causes of annoyance due to community noise. Noise can make it difficult to fall asleep, create momentary disturbances of natural sleep patterns by causing shifts from deep to lighter stages, and cause awakening.

Physiological responses. Physiological responses are the measurable effects of noise which are realized as changes in people's pulse rate, blood pressure, etc. While such effects can be induced and observed, the extent to which these physiological responses cause harm or are signs of harm is not known. Generally, physiological responses are a reaction to a loud short-term noise such as a rifle shot or a very loud jet overflight.

Annoyance. Annoyance is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and personal sensitivity to noise varies widely. It has been estimated that 2 to 10 percent of the population is highly susceptible to noise not of their own making, while approximately 20 percent are unaffected by noise.

8.2 MAJOR NOISE SOURCES IN THE PLANNING AREA

A community noise survey was conducted in July 1991 to ascertain existing noise levels in the Planning Area. As of 2001, the 1991 noise survey was determined to be adequate because growth occurred consistent with the General Plan and no significant new noise source existed or was expected. As a result, a new comprehensive noise analysis was not conducted. Sources of noise identified through the 1991 survey include major roadways, railroads, stationary sources including industrial plants, and farm operations.

Noise from traffic on local roadways and neighborhood activities is the controlling factor for background noise in most of the Planning Area. Areas that contain noise-sensitive uses, such as schools and residences, are

relatively quiet — in 1991, ambient noise level in these areas was measured in the range of 52 dB to 59 dB L_{dn}. The impacts of different sources on the noise environment in Turlock are discussed below.

Roadways. The maximum noise levels are along Highway 99, but because it is surrounded by urban uses, Golden State Boulevard impacts a much larger inhabited area. On stretches of Monte Vista Avenue, Geer Road, Lander Avenue, Berkeley Avenue, Tuolumne Road, Canal Drive, and West Main Street, the 65 L_{dn} contour extends more than 70 feet from the road centerline. Land uses closer to the roadway are subject to noise levels considered inappropriate for many uses. Special construction and design techniques can mitigate problems in some cases. Table 8.2–A shows distance from center of roadways to different contours along the major thoroughfares.

Railroads. Railroad activity includes approximately 18 freight train operations per day along the Union Pacific Railroad (UPRR) track running parallel to Golden State Boulevard passing through some residential areas. A maximum of two local freight trains operate per day on the local Union Pacific Railroad (UPRR) tracks, which run parallel to Castor Street.

The Santa Fe Railroad runs through Denair. Approximately 18 freight trains and six Amtrak trains per day operate along the segment of the Santa Fe track in the Planning Area. The freight trains operate on an unscheduled basis throughout the day and night. Amtrak operates four trains during the daytime and two trains during the night. Distances to railroad noise contours are shown in Table 8.2–B.

Stationary sources. The primary stationary sources of noise in Turlock are industrial facilities in the south and southwestern part of the City. There are also other facilities and commercial operations dispersed throughout the Planning Area; the largest are close to major roadways and railroad tracks. A majority of noise is from heavy machinery and from truck traffic to and from operation sites. The local noise environment is typically dominated by traffic, but in the evening and nighttime, industrial processing can become audible in some adjoining residential areas.

Noise exposure inside industrial facilities is controlled by Federal and State occupational health and safety regulations, but exterior noise levels are not. The greatest potential for problems created by industrial noise arises when residential areas are affected. West of Highway 99, the City's principal industrial area is separated from residences and other sensitive noise receptors. Industrial expansion during the General Plan buildout period will also be west of Highway 99, minimizing industrial noise

intrusion in residential areas. However, industrial activities south of Downtown on both sides of Golden State Boulevard have the potential to affect scattered residences and some neighborhoods. Evening and nighttime operations at a number of industrial plants (e.g., Purina Mills, Americold, Con Agra Turkey) can make the problem worse.

Farm Operations. Some of the more common noise sources associated with farming operations include tractors and harvesting and spraying equipment. Although farming occasionally generates significant noise, such levels generally do not last more than a few hours at a given location unless a stationary piece of equipment, such as a pump motor, is involved. Nighttime operation of farming equipment adjacent to residential areas may be perceived as annoying, particularly if sleep is disrupted.

TABLE 8.2-A
ROADWAY NOISE CONTOUR DATA

Street-Segment		Distance to L_{dn} Contour (feet) from Center of Roadway	
		60 dB	65 dB
Golden State Boulevard:			
1	Taylor to Monte Vista	162	75
2	Monte Vista to Pedras	176	82
3	Pedras to Canal	153	71
4	Canal to Main	189	88
5	Main to Linwood	143	66
State Route 99:			
6	Monte Vista to Main	1744	809
7	Main to Linwood	1351	627
Monte Vista:			
8	Golden State to Geer	153	71
9	Geer to Berkeley	148	69
10	Berkeley to Quincy	67	31
Geer Road:			
11	Taylor to Monte Vista	127	59
12	Monte Vista to Tuolomne	159	74
13	Tuolomne to Canal	208	96
Lander Avenue:			
14	Main to Linwood	131	61
15	Linwood to S.R. 99	98	45
Berkeley Avenue:			
16	North of Monte Vista	44	20
17	Monte Vista to Tuolomne	70	33
18	Tuolomne to Main	94	44
Tuoloumn Road:			
19	Golden State to Geer	66	31
20	Geer to Berkeley	75	35
Canal Drive:			
21	S.R. 99 to Golden State	44	20
22	Golden State to Olive	99	46
23	Olive to Berkeley	88	41
24	Berkeley to Quincy	77	36
West Main Street:			
25	Kilroy to S.R. 99	72	33
26	S.R. 99 to Lander	99	46
East Main Street:			
27	Golden State to Berkeley	58	27
28	Berkeley to Daubenberger	50	23

Source: Community Noise Survey conducted by Brown-Buntin Associates, July 1991

TABLE 8.2-B
RAILROAD NOISE CONTOUR DATA

	Distance to L_{dn} Contour (feet)	
Train Track	**60dB**	**65dB**
UPRR along Golden State Blvd	277	129
UPRR through industrial area	24	11
Santa Fe	302	140

Source: General Plan Background Document prepared by Brown-Buntin Associates, July 1991.

8.3 FUTURE NOISE PROJECTIONS

A "noise contour map" connects with closed lines those locations subject to the same average noise levels. Figure 8-1 shows projected traffic noise levels at General Plan buildout generated by traffic, the airport, and the railroad. The noise contour data is also provided in Table 8.3-A. The noise levels are expressed in Community Noise Equivalent Level (CNEL). CNEL is a 24-hour average describing a noise environment consisting of a variety of single events. To account for increased sensitivity to noise during nighttime hours, the CNEL calculation penalizes evening and night sound levels. The decibel (dB) scale is logarithmic; a 3 dB difference is barely discernable to most people, and a 10 dB increase is subjectively heard as a doubling of noise. Everyday sounds normally range from 30 dB (very quiet) to 100 dB (very loud). All noise levels (dB) described in the Noise Element are considered to be A-weighted, unless specifically described as otherwise.

Projected Future Noise

Figure 8-1

60 dB Ldn Noise Contours

Traffic Noise

Railroad Noise

Future Streets

Major Streets

N

0 4000 Feet

Turlock
General Plan

City of Turlock, Planning Division
Updated January, 2002

TABLE 8.3A
NOISE CONTOUR DATA DISTANCE (FEET)
FROM CENTERLINE OF ROADYWAY TO L_{dn} CONTOURS

Roadway/Segment	Description	Future 60dB	Future 65 dB
Golden State Boulevard:			
1	Taylor to Monte Vista	177	82
2	Monte Vista to Tuolomne	129	60
3	Tuolomne to Canal	218	101
4	Canal to Main	279	130
5	Main to Linwood	169	78
6	Linwood to County Line	301	140
State Route 99:			
7	Taylor to Monte Vista	1,461	678
8	Monte Vista to Main	1,966	913
9	Main to Linwood	1,588	737
10	Linwood to County Line	1,117	518
Monte Vista:			
11	Tegner to State Route 99	141	66
12	State Route 99 to Golden State	200	93
13	Golden State to Walnut	201	93
14	Walnut to Geer	162	75
15	Geer to Berkeley	116	54
16	Berkeley to Waring	59	27
17	Waring to Lester	123	57
Geer Road:			
18	Taylor to Monte Vista	174	81
19	Monte Vista to Tuolomne	208	97
20	Tuolomne to Canal	255	118
Lander Avenue:			
21	Main to Linwood	254	118
22	Linwood to State Route 99	198	92
23	State Route 99 to Expressway	148	69
Berkeley Avenue:			
24	Taylor to Monte Vista	36	17
25	Monte Vista to Tuolomne	31	14
26	Tuolomne to Main	64	30

TABLE 8.3A
NOISE CONTOUR DATA DISTANCE (FEET)
FROM CENTERLINE OF ROADYWAY TO L_{dn} CONTOURS

Roadway/Segment	Description	Future	
		60dB	65 dB
Tuolumne Road:			
27	State Route 99 to Golden State	113	53
28	Golden Sate to Geer	58	27
29	Geer to Berkeley	71	33
	East of Berkeley	67	29
Canal Drive:			
31	Tegner to State Route 99	46	21
32	State Route 99 to Golden State	60	28
33	Golden State to Olive	120	56
34	Olive to Berkeley	180	83
35	Berkeley to Quincy	168	78
36	Quincy to the East	144	67
West Main Street:			
37	Washington to Tegner	83	38
38	Tegner to State Route 99	196	91
39	State Route 99 to West Avenue	178	83
40	West Avenue to Lander	149	69
East Main Street:			
41	Golden State to Canal	46	21
42	Canal to Berkeley	72	33
Christofferson:			
43	Golden State to Walnut	159	74
44	Walnut to Geer	185	86
45	Geer to Olive	207	96
46	Olive to Quincy	199	92
47	Quincy to Santa Fe	156	72
Olive:			
48	Christofferson to Monte Vista	128	59
49	Monte Vista to Tuolomne	158	73
50	Tuolomne to Canal	178	83
51	Canal to Sander	233	108
Hawkeye:			
52	Berkeley to Olive	54	25
53	Olive to Geer	183	85

TABLE 8.3A
NOISE CONTOUR DATA DISTANCE (FEET)
FROM CENTERLINE OF ROADYWAY TO L_{dn} CONTOURS

Roadway/Segment	Description	Future 60dB	Future 65 dB
Fulkerth:			
54	Geer to Golden State	190	88
55	Golden State to State Route 99	202	94
56	State Route 99 to Tegner	129	60
57	Tegner to Washington	80	37
East Avenue:			
58	Golden State to Berkeley	202	94
59	Berkeley to Johnson	137	64
60	Johnson to Daubenberger	152	71
61	Daubenberger to Verduga	96	45
Harding:			
65	Golden State to State Route 99	279	130
66	State Route 99 to Golf Road	121	56
67	Golf Road to Washington	180	83
Washington:			
68	Taylor to Monte Vista	143	66
69	Monte Vista to Harding	188	87

Source: Brown-Buntin Associates

8.4 NOISE POLICIES

Guiding Policies

8.4-a Continue to use potential noise exposure as a criterion in land use planning.

Noise was one of many factors in the decision not to add residential areas west of Highway 99. This decision will prevent creation of a noise-impacted area that would later require mitigation.

8.4-b Protect public health and welfare by eliminating existing noise problems where feasible, maintaining an acceptable indoor and outdoor acoustic environment, and preventing significant degradation of the acoustic environment.

Decreasing noise magnitude at the source and limiting the times certain types and volumes of noise can occur are two of the approaches to noise attenuation taken in the City's Noise Control Ordinance. Transportation-related noise (vehicle noise emissions) is regulated by State and federal agencies.

8.4-c Require site planning and architecture to incorporate noise-attenuating features.

Site and building design (setbacks, topography, orientation of sensitive indoor and outdoor activity areas away from noise sources), construction materials (solid core doors, sound insulation, weatherstripping, and sealed windows), and external shielding (barriers, berms, sound walls) can all reduce interior noise levels as well as exterior levels at locations where noise is least desirable, e.g. children's play areas.

8.4-d Support measures to reduce noise emissions by motor vehicles, aircraft, and trains.

The most efficient and effective means of controlling noise from transportation systems is reducing noise at the source. The City, however, has little direct control over transportation source noise levels because of State and federal preemption (for example, State Motor Vehicle Noise standards). Compliance with State and federal agency standards is the best form of support.

Implementing Policies

8.4-e Evaluate all projects located within the Turlock Municipal Airport environs based upon the criteria established by the Merced County Airport Land Use Commission.

The City will continue its policy of commenting on all referrals from Merced County regarding proposed land uses in noise-sensitive areas.

8.4-f Require all major development projects and noise-sensitive receptors (major residential developments, schools, hospitals, nursing homes, parks, and playgrounds) to comply with the land use compatibility guidelines indicated by Figure 8-2. Compliance shall be based upon projected noise exposure levels at General Plan buildout shown on Figure 8-1. A noise analysis complying with Policy 8.4-h will be required when noise levels are projected to be conditionally acceptable or unacceptable, as these terms are defined in Figure 8-2 for different land uses.

Land Use Compatibility Guidelines for Development

Figure 8-2

Land Use Category	Community Noise Exposure L_{dn} or CNEL, dB					
	55	60	65	70	75	80
Residential, Theaters, Auditoriums, Music Halls, meeting Halls, Churches						
Transient Lodging- Motels, Hotels						
Schools, Libraries, Museums, Hospitals, Nursing Homes						
Playgrounds, Neighborhood Parks						
Office Buildings						

ACCEPTABLE	Specified land use is satisfactory. No noise mitigation measures are required.
CONDITIONALLY ACCEPTABLE	Use should be permitted only after careful study and inclusion of protective measures as needed to satisfy the policies of the Noise Element.
UNACCEPTABLE	Development is usually not feasible in accordance with the goals of the Noise Element.

8.4-g New residential, transient lodging, school, library, church, hospital, and convalescent home development should be designed to provide a suitable interior noise environment of no greater than 45 dB CNEL or Ldn.

The California Administrative Code, Title 24, Part 6, Division T25, Chapter 1, Subchapter 1, Article 4, Sections T25-28) requires that "Interior community noise levels (CNEL) with windows closed, attributable to exterior sources, shall not exceed an annual CNEL or L_{dn} of 45 dB in any habitable room." The Code requires that this standard be applied to all new hotels, motels, apartment houses, and dwellings other than single-family detached dwellings; this policy additionally applies the requirement to single-family detached dwellings. State law requires noise insulation of new multi-family dwellings constructed within the 60 dB CNEL noise exposure contours.

8.4-h A required noise analysis (see Policy 8.4-f, above) should:

- Be prepared by a certified noise consultant under contract to the City;
- Be funded by the applicant;
- Include a representative, on-site day and night sound level measurement;
- Include a delineation of current (measured) and projected (10 years) noise contours with and without the proposed project, ranging from 55 to 75 dBA (Ldn) within the proposed development site; and
- Include a description of adequate and appropriate noise abatement measures where sound measurements exceed Table 8.4-A standards for the proposed use.

A list of accredited noise consultants is available from the State Department of Health Services, Office of Noise Control, 2151 Berkeley Way, Berkeley, California 94794; phone (510) 540-2657.

8.4-i Do not allow new development of noise-sensitive uses where the noise level due to non-transportation noise sources will exceed the noise level standards of Table 8.4-A, as measured immediately within the property line of the new development, unless effective noise mitigation measures have been incorporated into the development design to achieve the standards specified in the table.

8.4-j Require mitigation of noise created by new proposed non-transportation noise sources so that it does not exceed the noise level standards of Table 8.4-A as measured immediately within the property line of lands designated for noise-sensitive uses. This policy does not apply to noise sources associated with agricultural operations on lands zoned for agricultural uses.

8.4-k Continue to enforce the City Noise Control Ordinance.

The City's ordinance addresses a wide range of noise-generating activities, establishing community standards and providing a basis for enforcement.

8.4-l Establish specific truck routes where noise impacts on frontage land uses are least likely to occur.

See Circulation Element Policy 5.6-C and Figure 5-3.

8.4-m Where possible (site conditions permitting), require noise buffers along arterial streets and railroad alignments if proposed new land uses along the routes will be subject to unacceptable noise levels as specified in Table 8.4-B. Noise buffers could involve some combination of special setback, earth berms, solid noise walls, special placement of non-occupancy accessory structures, placement of windowless building sites towards the noise source, building insulation techniques, etc.

Mitigation through the design and construction of a noise barrier (wall, berm, or combination wall/berm) is the most common way of alleviating traffic noise impacts. A noise barrier effect occurs when the "line of sight" between the source and receiver is penetrated by the barrier. The greater the penetration, the greater the noise reduction. Noise barriers often have the disadvantage of unsightliness; however, properly landscaped berms or walls shielded with climbing vines can, over time, become visual assets.

8.4-n Require mitigation of noise created by new transportation noise sources, including roadway improvement projects, so that noise does not exceed the levels specified in Table 8.4-B in outdoor activity areas or interior spaces of existing noise-sensitive land uses.

TABLE 8.4-A
NOISE LEVEL PERFORMANCE STANDARDS FOR PROJECTS AFFECTED BY OR INCLUDING NON-TRANSPORTATION SOURCES

Noise Level Descriptor	Daytime (7 a.m. to 10 p.m.)	Nighttime (10p.m. to 7 a.m.)
Hourly L_{eq}, dB	55	45
Maximum Level, dB	75	65

Each of the noise levels specified above shall be lowered by 5 dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises.

Source: Brown-BuntinAssociates.

TABLE 8.4-B
MAXIMUM ALLOWABLE NOISE EXPOSURE
TRANSPORTATION NOISE SOURCES

Land Use	Outdoor Activity[1] Areas L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL, dB	L_{eq}, dB[2]
Residential	60	45	--
Transient Lodging	60	45	--
Hospitals, Nursing Homes	60	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	60	--	40
Office Buildings	70	--	45
Schools, Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

[1]Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving use.

[2]As determined for a typical worst-case hour during periods of use.

[a]Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

[b]Where it is not possible to reduce noise in outdoor activity areas to 70 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 67 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Source: Brown-Buntin Associates.

Section 9
Safety Element

Health and safety considerations are an integral part of planning for a well-balanced community. The General Plan examines a range of safety issues, including those mandated by the State. Policies to mitigate hazards associated with natural and man-made disasters are also outlined. Safety issues closely related to topics addressed elsewhere in the Plan are discussed in other elements as noted in Table 9-A.

TABLE 9-A: LOCATION OF SAFETY TOPICS IN THE PLAN

Safety Topic	Element Where Addressed
Agricultural Spraying	Safety
Airport	Transportation
Electromagnetic Fields	Safety
Emergency Management	Safety
Fire	Safety/Public Facilities and Services
Flooding and Dam Inundation	Safety
Groundwater and Subsidence	Open Space and Conservation
Hazardous Cargo	Safety
Hazardous Waste	Open Space and Conservation
Railroad Crossings	Transportation
Seismic and Geologic Hazards	Safety
Storm Drainage	Public Facilities and Services

9.1 FLOODING AND DAM INUNDATION

Flooding. Though Stanislaus County experienced major floods in 1861, 1950, 1955, and 1969[1], Turlock was not affected. According to the Federal Emergency Management Agency (FEMA), no part of the Planning Area is within a special flood hazard area, including the 100-year flood zone.

Dam Inundation. According to U.S. Army Corps of Engineers' present (1992) standards, the entire Planning Area falls within the dam failure inundation area for the New Don Pedro Dam, located along Tuolumne River about 25 miles northeast of the Planning Area. Dam failure inundation areas are those that would be flooded if a dam were to fail completely within a one-hour period[2]. Such a disaster is highly unlikely, and would occur only under unique circumstances—the New Don Pedro Dam, a half-mile long and 40 feet wide, would have to completely give way, allowing two million acre-feet of water in the Don Pedro Reservoir to pass through in one hour.

Information and policies on storm drainage are included in the Public Facilities and Services Element. Additional information on hazards is in the General Plan Master Environmental Assessment.

9.2 SEISMIC AND GEOLOGIC HAZARDS

There are no known geologic faults in the Planning Area or in the valley portion of Stanislaus County. The nearest faults are the Tesla Ortigalita fault in the Diablo Range, and the Bear Mountain and Melones faults in the eastern part of Stanislaus County — both of which have been inactive for the last 150 million years[3]. There are no Alquist-Priolo Special Studies Zones in Turlock.

According to information from the State Department of Mines and Geology, two other concealed faults have more recently been discovered. The San Joaquin Fault, lying close to Interstate 5, about 18 miles west of Turlock is a Late Quaternary fault that shows displacement during the last 700,000 years. The Vernalis Fault, lying about 20 miles northwest of

[1] *Stanislaus County General Plan Support Documentation*, June 1987.
[2] Prior to 1988, dam failure inundation area maps were required to show the area flooded in the event of complete dam failure in four hours. The current Stanislaus County General Plan, prepared in 1987, does not portray any part of the Planning Area to be within the Don Pedro Reservoir Dam inundation area.
[3] *Stanislaus County General Plan Support Documentation,* 1987.

Turlock, is thought to belong to the Quaternary Period with displacement sometime during the past 1,600,000 years.

Like any other place in the Valley, the area could be impacted by earthquakes along faults in other parts of the region and elsewhere in California. Recorded earthquakes from faults outside the Turlock region have in the past produced ground shaking to an intensity of VI on the Modified Mercalli Intensity Scale of 1931[4]. According to the State Division of Mines and Geology, ground shaking to an intensity of VII is possible in the future.

A maximum-intensity earthquake would be capable of causing considerable damage in ordinary structures. Most injuries, loss of life and property damage during earthquakes result from structural failures due to ground shaking. Damage from ground shaking is a combined function of the structural integrity of the buildings before the earthquake, and the quality of soils or bedrock underlying the buildings.

Older structures generally were not built to withstand the lateral stress imposed by the groundshaking of a major earthquake. Generally, the older the structure, the less likely it is to resist an earthquake. This applies particularly to buildings having walls of non-reinforced brick held together by sand-lime mortar, and in general to all multistoried buildings that do not have steel reinforcements.

Most masonry structures in Turlock's Downtown were built in the 1920's, well before the adoption of stricter building requirements imposed in 1933. However, these structures, many of which have unoccupied second floors, have withstood the test of time defined by the Historical Building Code, and no action is planned to bring them up to code.

As part of implementing Public Resources Code Section 2690 *et seq.* (Seismic Hazards Mapping Act), the California Division of Mines and Geology is establishing a program to map liquefaction and landslide potential in various parts of the state. Efforts will initially be concentrated on major metropolitan areas, and it is anticipated that it will be a few years before studies in the Central Valley are initiated. The DMG will provide, in addition to maps, policies, and criteria regarding the responsibilities of cities, counties, and State agencies pursuant to development in designated seismic hazard areas.

[4] Personal Conversation with the Division of Mines and Geology and *DMG Open-File Report 81-11.* The Lone Pine earthquake of 1872, for example, produced ground shaking of VI intensity in the Turlock region.

Guiding Policy

9.2–a Continue to use building codes as the primary tool for reducing seismic risk in structures.

The Uniform Building Code, which has been adopted by Turlock, Stanislaus County and the other cities in the County, is intended to ensure that buildings resist major earthquakes of the intensity or severity of the strongest experienced in California, without collapse, but with some structural as well as nonstructural damage. In most structures, it is expected that structural damage could be limited to repairable damage, even in a major earthquake.

Implementing Policies

9.2-b Continue to require all new buildings in the City to be built under the seismic requirements of the latest adopted Uniform Building Code.

The Uniform Building Code places all of California in seismic risk zone 3, which means that all new structures must be designed to resist collapse in an intensity VIII earthquake.

9.2-c Continue to explore measures to induce building owners to upgrade and retrofit structures to render them seismically safe.

9.3 FIRE

The most significant structural fire hazards are the older masonry and wood buildings in the Downtown. Since most Downtown buildings were constructed prior to 1980, they are not subject to the City's Sprinkler Ordinance, which requires a sprinkler system or fire walls in all new construction with an area of over 6,000 square feet and sprinklers for buildings three stories or taller.

As of 2001 there are four operating fire stations in Turlock. The department is lead by a Fire Chief, along with three divisional chiefs. One Division Chief directs Fire Suppression Personnel, another Division Chief coordinates life safety and the activities of the Fire Inspector, and a third Division Chief organizes training and manages department documentation.

All fire stations also house suppression equipment and 24-hour fire personnel. Station staffing includes one Captain and an engineer at each station plus one floating executive Captian for a minimum of nine personnel per shift. The fire department's full-time professional staff is assisted by trained volunteers. The response time is five minutes in all service areas.

All fire departments in Stanislaus County have a mutual aid pact, which allows local jurisdictions to call for assistance from other communities. The fire department provides an "Insurance Services Office (ISO) Class IV" level of fire protection to all areas within the present Sphere of Influence boundary.

Guiding Policies

9.3-a Continue to protect people and property from fire hazards.

9.3-b Continue to cooperate with other agencies to provide fire protection to locations throughout the County.

Implementing Policies

9.3-c Implement a comprehensive plan which calls for a central public safety building in the Geer Road/Hawkeye Avenue area, and a satellite fire station in each one of the four City quadrants.

See also Section 4.4: Public Safety Services

In 2001, an extensive site study concluded that Station No. 1, located at Minaret Avenue and Hamilton Street, is in an optimum location for service distribution. Consequently, the City of Turlock is considering a plan to remodel the station within a five-year period. A fourth station was added on North Walnut Road near Monte Vista Avenue.

9.3-d Maintain a Fire Department response time of five minutes or less for all urban service areas.

9.3-e Maintain mutual aid agreements with other departments in Stanislaus County.

9.3-f Continue enforcement of the Sprinkler Ordinance. As required by the ordinance, buildings over three stories should offer full mitigation against fire hazards.

9.4 EMERGENCY MANAGEMENT

The City of Turlock adopted its Emergency Preparedness Plan in September of 1994. The Plan addresses a comprehensive range of issues, including priorities and procedures for coordinating evacuation routes in the event of a disaster.

Guiding Policy

9.4-a Continue to cooperate with Stanislaus County and other jurisdictions in preparing and implementing Emergency Preparedness Plans.

Implementing Policy

9.4-b Update the Emergency Preparedness Ordinance periodically to maintain currency with available information.

9.5 MISCELLANEOUS HAZARDS

ELECTROMAGNETIC FIELDS

For a detailed examination of electromagnetic fields issues, see the Master Environmental Assessment. Electric and magnetic fields abound in nature and emanate from the flow of electricity through everything from transmission lines to domestic appliances. While several studies suggest a possible connection between cancer and extremely low frequency (ELF) electromagnetic fields, the link has not been conclusively established.

The Turlock Irrigation District has no official setback recommendations for development adjoining power transmission lines. The School Facilities Planning Division of the State Department of Education has established limits for locating school sites near high voltage power

transmission line easements.[5] These standards require setbacks ranging from 100 feet from the edge of an easement for a 100 kilovolt (kv) line to a 350-foot setback for a 500-550 kv line. The voltage in the transmission lines in the Planning Area is 230 kv which would be applicable to this standard. A 230 kv transmission line parallel to the Tidewater Southern Railroad runs from the western edge of the Planning Area to the distribution substation near Washington Road; this is remote from existing or planned non-industrial development.

AGRICULTURAL SPRAYING

A number of herbicides and insecticides which are classified by the State Department of Food and Agriculture (DFA) as potentially injurious to humans are used in the County. Although injuries from injurious agricultural chemicals are experienced predominantly in occupational situations (i.e., direct handling), some hazards to neighboring land uses may occur during application. For example, if crop spraying occurs adjacent to human-occupied urban uses on a windy day, drift could create a hazard. For this reason, State law stipulates that such sprays shall not be applied or drift on a residential area. Some chemicals such as Methyl Bromide require a buffer zone from residential areas. Use of any of a list of hundreds of insecticides and herbicides which are classified as "injurious" by the DFA is prohibited without issuance of a permit.

HAZARDOUS CARGOES

As on other portions of the State highway system and the railroads, a wide range of hazardous cargoes are regularly transported along Highway 99 and the railroads that cross the Planning Area. Types of hazardous cargoes regularly transported by freeway or rail include flammable liquids, corrosive materials, compressed and/or poisonous gases, explosives, flammable solids, irritating materials and radioactive materials. The transportation of such cargo creates obvious hazards for existing and proposed land uses adjacent to those transportation routes.

Some potential exists, for example, for spillage of flammable liquid due to a highway or railway mishap, subsequent ignition of liberated material, and possible human casualty and property damage in the path of the burning liquid. Burning spillage can also drain into nearby drainage facilities, spreading fire and increasing the area of damage.

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[5] California State Department of Education, *School Site Selection and Approval Guide,* 1989; School Facilities Planning Division, 1991.

Guiding Policies

9.5-a Cooperate and coordinate actions with other local and State agencies and private organizations to minimize risks associated with hazardous cargoes, agricultural spraying, and electromagnetic fields.

CalTrans, the California Highway Patrol (CHP), the State Department of Food and Agriculture, and the State Department of Education all share concern and responsibility for potential hazards described in this section.

9.5-b Coordinate land use policies with concerns about potential hazards.

Policies in Section 7 calling for buffers between urban and agricultural activities will reduce the risk of exposure of urban residents to agricultural chemicals. Continued use of SR-99 as the western edge of residential development in the City will reduce the number of people that might be exposed to hazards created by spills on the highway. Concentration of industrial activity west of the highway away from housing reduces the risk from accidents that might occur at industrial sites, and also helps to separate industrial vehicle traffic from other traffic on local streets.

Implementing Policies

9.5-c In close cooperation with the railroads, evaluate the safety characteristics of existing at-grade railroad crossings, and promote improvements to the extent feasible and as necessary to reduce potential for mishaps involving hazardous cargo.

See also Policy 5.6-j.

9.5-d To the extent feasible, locate new buildings of high public occupancy — particularly schools, hospitals, civic and institutional uses — at an adequate distance from main railroad alignments and the highway to minimize risks to life and property in the event of a hazardous cargo accident.

Section 10
Implementation Program

This Implementation Program is not an adopted part of the General Plan. The program relates closely to the Plan by bringing together policies from throughout the document. Its purpose is to serve as a reference for City staff and decision makers as they program City implementation efforts during the next several years. For members of the public, the Implementation Program will serve as a summary of the major near-term activities the City will undertake in order to realize the guiding principles of the General Plan. The program identifies eight separate implementation programs.

The programs listed here do not comprise an exhaustive list of implementation actions which the City will undertake in the coming years. Such a list would amount to a duplication of much of the General Plan text, so it has not been attempted. Instead, these programs are those major projects that combine policies from multiple General Plan elements or that will facilitate implementation of multiple policies from a single element.

Because the Implementation Program is not adopted as part of the General Plan, it may be amended as needed should the City determine that a different organization of implementing activities would be preferable to the one described here.

10.1 ZONING ORDINANCE AND ZONING MAP REVISION

Policies throughout the Plan call for changes to the City's Zoning Ordinance. These policies are referenced and summarized in Table 10.1-A. In addition, requirements that the General Plan and Zoning Ordinance be consistent with each other mandate a review and update of the Zoning Map to assure consistency with the General Plan diagram. The diagram, together with the land use classifications in Section 2.1, provides the basis for revisions to the City's Zoning Map.

TABLE 10.1-A
CROSS REFERENCES TO TEXT AND POLICIES RELATING TO ZONING ORDINANCE AND MAP REVISIONS, 2001

Text Section or Policy Number	Topic(s) Addressed
Section 1.4	Consistency between the General Plan and Zoning. The zoning ordinance was updated in 1997 to comply with the General Plan policies. Numerous properties were rezoned in 1997 and 2001 to comply with General Plan land use designations. See Section 2 for more detail.
Section 2.1	Land use classifications establishing allowable uses, residential density ranges and maximum building intensities for non-residential uses. The zoning ordinance was updated in 1997 to comply with the General Plan policies including allowable uses, residential density, and building intensity.
Policy 2.3-g	Residential standards to be adopted as part of the Zoning Ordinance or in residential design guidelines. The zoning ordinance, updated in 1997, provided residential standards in compliance with the General Plan. In 1997, design guidelines were also adopted, but not as part of the zoning ordinance.
Policy 2.4-m	Amendment of the Zoning Ordinance to distinguish among types of retail areas consistent with the Plan.
Policy 2.5-f	Land supply designated by the General Plan, annexed and zoned for industrial use. The 1992 General Plan designated over 1,000 acres of industrial land primarily on the west side of the freeway. Over 300 acres have been annexed and zoning industrial since 1992. In 2001, the City of Turlock initiated the preparation of a specific plan on the entire industrial area on the west side of the city.
Policy 2.6-f	Revision to the professional/administrative zoning district making professional and administrative offices a permitted use and housing a conditional use. The 1997 zoning ordinance update revised the P/A zoning district to C-O, Commercial Office, allowing offices as a permitted use.

Housing Element Program Component IIIB	Zoning ordinance revisions intended to remove governmental constraints to housing production and conservation (revisions are detailed in the full Housing Element). Since 1992, the zoning ordinance has been changed to require a Minor Discretionary Permit instead of a Conditional use permit for multi-family dwelling with five or more units.
Policy 4.1-k	Amendment of park dedication ordinance to reflect General Plan standards for park acreage in relation to population. The Parks Master Plan adopted 1995 established updated standards for parks dedication. The 2001 General Plan review will adopt the Parks Master Plan standards.
Policy 7.2-n	Facilitating mixed-use projects in Downtown. Residences are allowed as part of a mixed use development or in conjunction with an artists studio in the downtown area. In 2002, the City of Turlock is planning on approving a Downtown overlay zoning district with design guidelines.
Policy 7.2-o	Preserving residential areas north and east of Downtown by minimizing non-conforming residential uses consistent with the General Plan Diagram. In 1997, some properties were rezoned to residential in the Downtown area.
Policy 7.3-g	Permitting uses that will comprise the neighborhood units shown on the General Plan Diagram and described in Plan Section 7.3 In 1999, the adoption of the Area-Wide Planning Policy requires that future annexations must include area-wide planning to address a variety of issues including land use to be consistent with the General Plan.
Section 7.7	Urban design policies for development in neighborhoods and the Business Park. Design Guidelines were adopted in 1997.

10.2 DEVELOPMENT GUIDELINES

In order to implement the General Plan and facilitate the process of development approvals, Plan policies in the Land Use and City Design elements call for preparation of development guidelines that will describe the City's standards for development of different types. Policies in Sections 2.3 and 7.7 should be implemented through the design guidelines. In the near-term, these guidelines will be implemented through staff-level review of project applications. In the future, the City may determine that the Guidelines should be implemented as part of the work of the Planning Commission or a new design review commission.

Design Guidelines were adopted in 1997.

10.3 HOUSING ELEMENT PROGRAM IMPLEMENTATION

Section 7 of the Housing Element includes a five-year housing program. The program identifies nine program purposes as dictated by State law, and for each one it lists specific program components. The components are the implementing actions to be undertaken. Each one is described, along with a specification of the agency responsible for implementation, the funding source, the quantified goal for housing production or conservation, and the income group(s) affected by the program. The program is summarized in this volume in Table 7.1-A.

10.4 REORGANIZATION FOR ENHANCED PARKS AND RECREATION SERVICES

General Plan policies for parks and recreation relate to park acquisition and development, financing, and programming. Implementing Policy 4.1-h calls for examining the present organizational arrangement of park and recreation facility management and park maintenance to enhance these relationships. Implementing Policy 4.1-t calls for expanding the role of the Community Activities and Facilities Commission in Park planning. These organization changes are intended to make Parks and Recreation operations more efficient, to make the City's organizational structure more easily understood by its residents, and to emphasize the importance of the full range of Park and Recreation functions.

Under the present organizational arrangement, the Grounds Division of the City Manager's Office is responsible for maintenance of all parks except for Atch Pedretti Park. The Department of Community Activities and Facilities runs all recreation programs, reserves all city parks, and maintains all city buildings. Park planning, acquisition and development is also centered in the Community Activities and Facilities Department, although the lack of a Parks Master Plan has weakened a serious commitment to new park land acquisition and development.

Maintenance of all city-owned landscaped areas and park planning and development is administered by the Public Service Maintenance Division of the Municipal Services Department. Recreation Services and Neighborhood Services Division of Turlock Police Services administer city-sponsored recreation programs.

10.5 MONITORING AND EVALUATION OF THE GROWTH MANAGEMENT ORDINANCE

The City's Growth Management Ordinance, adopted in April 1991, requires City staff to submit a report early in 1993, and each year after that, describing building activity that has occurred under the Program, as well as the status of meeting regional housing goals, and comments received relating to the Growth Management Program. As specified in the Ordinance, the Growth Management Program will expire on December 31, 1996 unless extended by City Ordinance.

Housing Element policies add to the review and evaluation process for the Growth Management Ordinance by establishing that:

- In evaluating whether the program should be extended past the 1996 sunset date, the City will prepare an analysis of whether the Growth Management Program has acted as a constraint to the production of housing; and

- In addition, the City will analyze the ability to meet Regional Housing Goals in place in 1996 under the provisions of the Program. If Housing Goals cannot be met and the duration of the Growth Management Program is to be extended, the maximum allowable dwelling unit additions will be revised unless they must be retained for the purpose of protecting the public health, safety and welfare.

(These provisions are part of the Housing Element Program referenced in Housing Action Program Component IIIA.)

The GMP was rescinded in 1997. In 1998, the City of Turlock adopted an annexation policy that focuses annexations and growth to one quadrant of the city at a time. In 1999, the City adopted a policy that requires area-wide planning in conjunction with future annexations. Each area-wide plan shall address land use, circulation, housing, open space, infrastructure, public facilities and public services consistent with the General Plan.

10.6 SPHERE OF INFLUENCE AMENDMENT

Key General Plan policies relate to future urban expansion, and as a complement, promotion of continued agricultural production on lands not planned for urban use. Implementing these policies will require modifications to the City's 1992 Sphere of Influence, through both additions and deletions to the Sphere. The 1992 boundaries and planned modifications are shown in General Plan Figure 2-3.

Decisions on the City's Sphere are made by the Stanislaus County Local Agency Formation Commission (LAFCO), which also makes decisions regarding annexations to cities and special districts. The City will initiate a request to LAFCO for the boundary modifications, and will prepare all necessary documentation to accompany it.

The Sphere of Influence was modified by LAFCO, including all industrial land designated on the General Plan Diagram, on August 25, 1993, Stanislaus County Local Agency Formation Commission Resolution No. 93-12.

10.7 DOWNTOWN STRATEGIC PLAN IMPLEMENTATION

In February 1991, the City Council adopted a "Strategic Plan of Action" for Downtown Turlock. The Downtown Master Plan discussed in Section 7.2 of the General Plan is one result of the Strategic Plan. Other projects proposed in the Strategic Plan are:

- Turlock Entryway Beautification, consistent with policies in the City Design Element calling for establishment of design guidelines and a zoning overlay district for entry areas;
- Downtown Area Gateway Identity;
- Downtown Transportation Center, the multimodal center discussed in Circulation Element section 5.3;
- Private Sector Design Guidelines, not addressed explicitly in the General Plan, but consistent with the Plan's Guiding Policies for Downtown;
- Economic Feasibility Studies, not addressed explicitly in the Plan, but consistent with the Plan's Guiding Policies for Downtown; and
- Establishment of a Downtown Action Committee, not addressed explicitly in the Plan, but consistent with the Plan's Guiding Policies for Downtown.

The City of Turlock has hired a consultant to prepare a Citywide Beautification Master Plan which is expected to be completed in 2002. The Plan will address the Highway 99 Corridor, major gateways off Highway 99, and major arterials through Turlock. In 2002, the City of Turlock is also planning on approving a Downtown overlay zoning district with design guidelines.

The first phases of the Downtown Master Plan are underway in summer 1992, including preliminary soils analysis, preliminary design details and cost estimates. An assessment district financing program to fund first-phase improvements is moving ahead. It is expected that these steps will be completed in the first quarter of 1993.

The Downtown Property and Business Improvement District was formed in 1998. A $5.5 million bond was awarded to the

Redevelopment Agency in 1999 for a Downtown revitalization project. The revitalization project, completed in 2001, reconstructed Main Street between Lander and Palm Avenues and included new public parking lots.

10.8 INITIATE REDEVELOPMENT PROJECT

The City has had a Redevelopment Agency since the early 1980s. The Agency has been inactive, however, since voters overturned the establishment by the City Council of a Redevelopment Area. In 1992 the City Council reactivated the Agency and directed City staff to study choices for establishing a new Redevelopment project area. In July 1992 the Redevelopment Agency adopted a resolution establishing that "any redevelopment plan to be adopted by it shall exclude the use of condemnation for the purpose of land assembly for private projects, and the use of condemnation by the agency shall be strictly limited to the same public purpose test and standards that apply to the City of Turlock in the exercise of its condemnation powers." This resolution restricting the powers of the Redevelopment Agency is intended to relieve the concerns of property owners and other interested parties who opposed earlier redevelopment efforts because of the potential for condemnations.

In the first quarter of 1993 the City Council, acting as the Agency, has adopted a Redevelopment Project Area encompassing most of the older areas of the city.

In 1996, the redevelopment area was expanded to include properties along Golden State Boulevard, Monte Vista Avenue, Geer Road, and the industrial area on the west side of the city.

Appendix A: Circulation System Planning and Design Criteria

A.1 FREEWAYS

A.1-a California Department of Transportation (Caltrans) design standards should be followed.

A.1-b All interchanges/intersections should be designed for high volume urban traffic.

A.2 EXPRESSWAYS AND ARTERIALS

A.2-a Expressways/arterials should be spaced at a maximum of one mile intervals where possible to properly move through-traffic without congesting collector and local streets.

A.2-b All roadways designated as "expressways" in the General Plan should have sufficient right-of-way reserved to allow a four lane roadway and a 16-foot median with a minimum of one right- and one left-turn lane on each intersection approach.

A.2-c Local and collector street intersections with expressways/arterials should be spaced a minimum of 600 feet apart. Expressway/arterial intersections with other expressways/arterials should be spaced a minimum of 1,300 feet apart. This would allow progression of traffic flow along an expressway/arterial should the intersections ever be signalized. No intersection ith an expressway/arterial should be closer than 1,000 feet to an expressway/arterial intersection with a freeway on-off ramp.

A.2-d Future driveways to commercial and multifamily land uses along expressways/arterials should be limited. No driveway along an expressway/arterial should be within 250 feet of the intersection of two expressways/arterials or an expressway/arterial and a collector street. On-street parking should not be permitted along any thoroughfare adjacent to commercial establishments. On-street parking should not be allowed within 100 feet in either direction from any driveway to a commercial or employment area (to provide adequate sight distances for turning vehicles).

Shareddriveways between adjacent businesses should be required where projected traffic volumes to and from both businesses are light (less than 80 vehicles per hour from both). Right turns only should be permitted at driveways with a median used to prevent left turn ingress or egress.

A.2-e Some commercial and employment area driveways now feeding onto existing expressways/arterials should be closed if an adjacent driveway can accommodate the diverted traffic. This could eliminate potential turn conflicts.

A.2-f Where possible, all existing and proposed expressways should be designed as parkways to provide more extensive landscaping along the roadways.

A.2-g Only expressways/arterials should cross the railroad (at-grade or grade-separated). Any intersections with an expressway/arterial having an at-grade crossing should be located a minimum of 600 feet from the crossing.

A.2-h Any additional railroad crossings should be grade-separated.

A.2-i Broad curving alignments along expressways/arterials should be encouraged (permitted allowable speeds up to 45 miles per hour).

A.2-j Business and commercial area address numbers should be posted for each property and should be readable from the street.

A.3 COLLECTOR STREETS

A.3-a Collector streets should be spaced at one-quarter mile intervals where possible to properly move through-traffic to expressways/arterials without congesting local streets.

A.3-b All future and existing collectors should have sufficient right-of-way to allow two mid-block travel lanes (with on-street parking) and left- and right-turn lanes on each collector or expressway/arterial intersection approach.

A.3-c Residential units may feed directly to collector streets, although this practice should be avoided wherever reasonable alternatives exist.

A.3-d Commercial and employment area driveways should connect to collector streets, although their number should be limited to the minimum possible. Shared driveway uses are encouraged for businesses which do not generate high volumes of traffic.

A.3-e On-street parking should be prohibited within 50 feet in both directions from any driveway to commercial or employment areas to provide adequate sight distances for turning vehicles.

A.3-f Curving alignments along collectors are encouraged (permitting allowable speeds up to 35 miles per hour).

A.4 LOCAL STREETS

A.4-a Local streets should have narrower alignments to promote driving speeds of 25 miles per hour or less. Straight sections in excess of 600 feet without perpendicular intersections should not be allowed.

A.4-b Local streets should not be more than 2,500 feet in length. Local streets longer than one-half mile promote usage as alternatives to nearby collectors and expressways/arterials and should be discouraged.

A.4-c Local streets should not be designed to provide an alternative route around existing or potential signalized intersections.

A.4-d Local streets which "dead-end" should not serve more than 20 residential units unless provided with an alternative ingress/egress route for fire and safety access.

A.4-e When property is developed adjacent to vacant property, at least one local street access should be provided to the vacant property from the developed property whenever possible.

Appendix B: Energy Conservation Guidelines

SOLAR ORIENTATION OF BUILDINGS AND LOTS

The greater the success in designing Turlock subdivision streets and lots for solar orientation, the easier it is for siting a solar building. When streets cannot be optimally solar oriented due to topography or circulation considerations, the lot pattern can usually be adjusted for solar orientation. When neither streets nor lot patterns can have a solar orientation due to other overriding considerations, special building siting without respect to the direction of lot lines or street frontage should be considered.

The solar orientation guidelines which follow are based upon the Turlock areas seasonal sun relationships diagrammed in Figure B-1. In applying these guidelines, it should be understood that general site planning, road alignment, and building orientation measures can moderate energy use only to a limited extent. These measures can assist in a building's solar performance only if the building itself is designed to take the local climate into account.

Building orientation affects both a structure's heat gain and loss characteristics. In Turlock, maximizing south-wall solar orientation of individual units will allow minimal solar exposure during the summer months, and best use of winter sun for space heating. Similarly, west-side wall exposure to afternoon summer sun should be minimized.

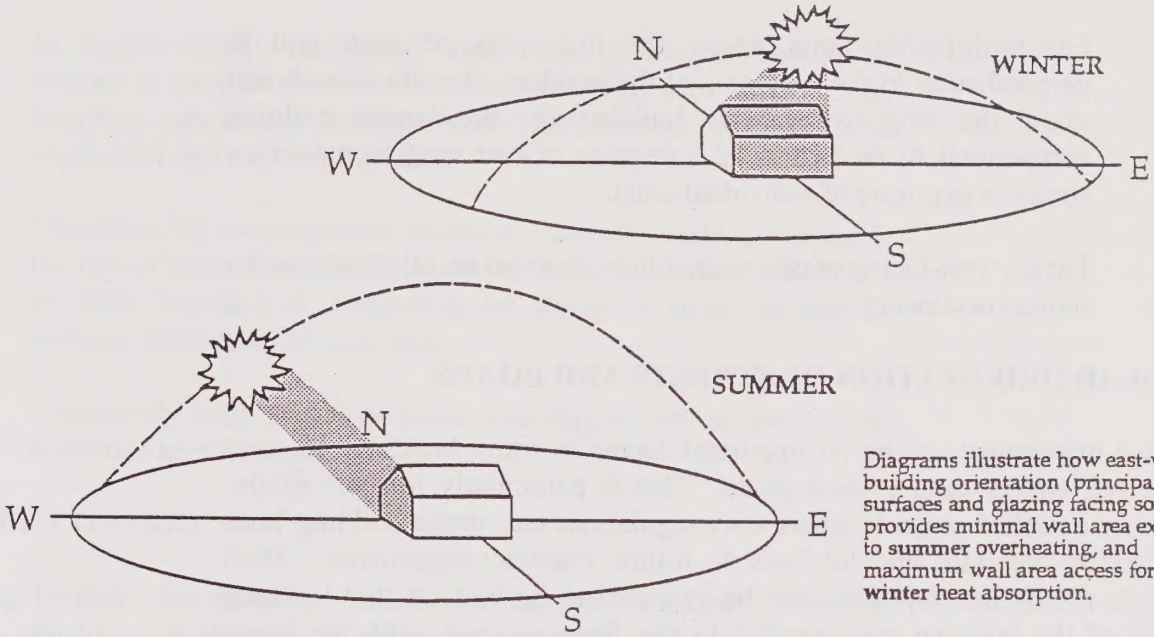
The following specific solar orientation guidelines should be applied to future residential developments in Turlock:

- For single-family detached units, site plans should allow the long axis of the majority of project homes to be within 22.5 degrees of the east-west axis to maximize south-wall and minimize west-wall exposure.

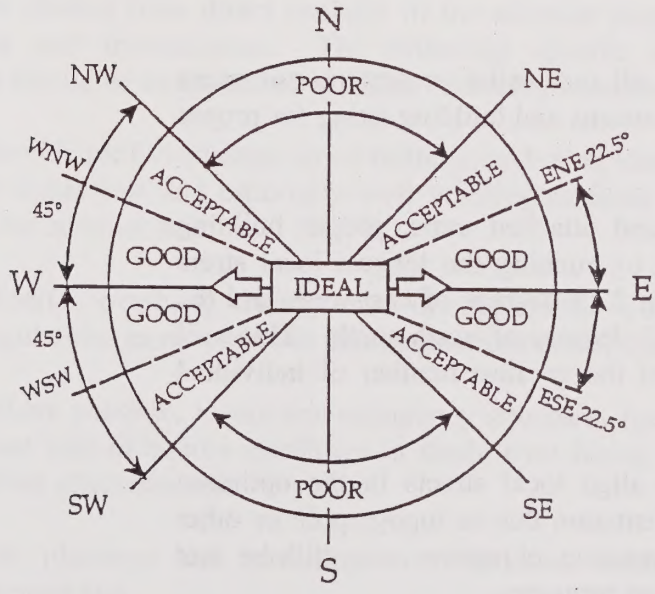
- For single-family attached units (common-wall homes), site plans should allow the long axis of the majority of individual common-wall units to be oriented within 22.5 degrees of north-south to maximize south-wall exposure for individual units.

SOLAR ORIENTATION PRINCIPLES

Figure B-1

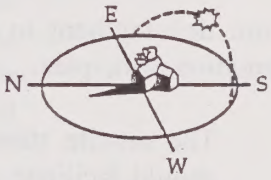


Diagrams illustrate how east-west building orientation (principal wall surfaces and glazing facing south) provides minimal wall area exposed to summer overheating, and maximum wall area access for winter heat absorption.



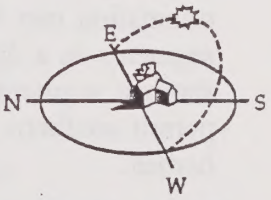
Long Access Orientation for Detached Housing
45° variation from ideal east/west orientation is acceptable, and a maximum 22.5° variation is best, to assure proper summer shade control and winter heat gain.

Winter



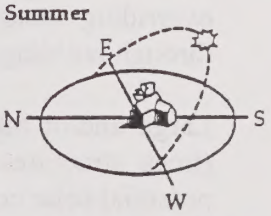
9 hours of daylight

Fall and Spring



12 hours of daylight

Summer



15 hours of daylight

Source: City of Turlock Department of Planning and Community Development.

- For multifamily units where the long axis of each unit is perpendicular to the long axis of the building, the site plan should allow the long axis of the building (or the largest building component) to be within 22.5 degrees of east-west to maximize southern exposure of individual units.

- Large, west-facing windows should be avoided on all structures for human occupancy.

SOLAR ORIENTATION OF STREETS AND ROADS

Road orientation can be an important factor in siting buildings to meet Turlock energy conservation goals. This is particularly true for single-family detached projects where City regulations encourage building lines to follow lot lines and lot lines to follow roadway alignments. Most single-family developments can be expected to be built so that the long axis of the building runs parallel to the frontage road, with the home facing the street.

Future development in Turlock should incorporate the following solar orientation principles:

- The on-site street pattern in all residential project master plans should facilitate optimal lot patterns and building siting for proper solar orientation.

- For single-family detached and attached units, proper building orientation can be facilitated by running the longest local street segments in a direction within 22.5 degrees of east-west, and the shortest segments within 22.5 degrees of north-south. This will permit southern orientation of the greatest number of individual homes.

- Where it is not possible to align local streets in the optimum direction for proper solar orientation due to topographic or other overriding factors, solar orientation objectives can still be met through building and site design measures.

- Large and/or tall objects capable of casting significant shadows (trees, structures, etc.) should be located so that they do not shade potential solar collector surfaces.

- In higher density residential areas building heights should be limited to provide unobstructed south-wall and roof solar access. Building separations should be sufficient to avoid obstructions of south-wall and roof solar access.

- Maximum lot coverage restrictions in Turlock should not prohibit the use of ground-mounted collectors. Solar collectors should not be fully included in computing lot coverage (treat similar to terraces, balconies, and porches).

- Excessively wide streets or street widening should be avoided to minimize heat radiation.

SHADE CONTROL

During Turlock's hot summer months, direct sunlight exposure of building walls, windows, roofs, and paved areas can heat these surfaces and surrounding space above maximum air temperatures, creating increased demands for mechanical space cooling. To reduce associated energy use while maintaining human comfort, building surfaces and paved areas should be shaded from direct sunlight in the summer months to reduce heat gain and transmission. The following specific shade control measures should be incorporated in future Turlock development projects:

- Provide roof overhangs, wood trellises, and other sunshade devices to shade east and especially west building surfaces and windows from summer sun.

- Modify overhang restrictions in applicable Turlock zoning regulations as necessary to permit generous use of shading devices.

- Where possible, locate non-occupancy structures (garages) on the west side of nearby dwellings to shade west-facing walls against direct afternoon sun.

- Use plantings and screening to shade west walls exposed to summer sun.

- Provide deciduous tree cover to shade streets and parking areas and reduce summer heat radiation.

SOLAR ACCESS

The Turlock sphere of influence is generally flat with excellent solar access available to nearly all of the community. These conditions, together with rising energy costs and local housing affordability goals, make the use of passive and active solar energy systems for residential space conditioning and water heating particularly appropriate. To maximize potential for solar energy use, access to solar radiation should be protected for each residential building site through the following measures:

- Plant materials and their locations should be carefully selected to avoid shading south-facing walls in the winter heating season.

- On individual lots, larger setbacks or yard areas should be provided on the south sides of dwelling units to maximize solar access.

- Private and public open space areas should be located to the south of development sites wherever possible to assist in protecting solar access to building.

- Use of solar collectors of water, space, and swimming pool heating should be encouraged. Solar collectors should be added to the list of items exempted from Turlock Zoning Ordinance building height restrictions (antennae, chimneys, etc.).

- Consider offering incentives (density bonuses, development review advantages, etc.) to encourage incorporation of solar energy systems in residential projects for space conditioning and water heating purposes.

MATERIALS CONSERVATION

Energy can be conserved through careful selection of construction materials and by using less material more efficiently. Materials conservation can result in less energy use to produce, transport, install, operate, and maintain Turlock buildings and improvements. The major areas in which materials conservation could be achieved in Turlock development are grading, paving, utility runs, and use of non-structural storm drainage solutions.

Appendix C: Glossary of Terms and Abbreviations

Acre-Foot. The volume of water that would cover one acre to a depth of one foot. An acre-foot is about the amount of water used each year in and around the home by two average California families.

Acres, Gross. The entire acreage of a site calculated to the centerline of planned bounding streets and to the edge of the right-of-way of existing or dedicated streets.

Acre, Net. The portion of a site that can actually be built upon. Not included in the net acreage of a site are public or private road rights-of-way, public open space, and flood ways.

ADT. Average daily traffic, a two-directional 24-hour motor vehicle traffic volume.

Affordable Housing. Dwelling units for which the housing payment is not more than 30 percent of household gross income for a specified income group.

Alluvium. A general term for clay, silt, sand, gravel, or similar unconsolidated material deposited during comparatively recent geologic time by a stream or other body of running water as a sorted or semi-sorted sediment in the bed of the stream or on its flood plain or delta, or as a cone or fan at the base of a mountain slope.

Aquifer. A water-bearing rock, rock formation, or a group of formations.

Article 34, Referendum Authority. Requirement of the California State Constitution. Mandates that state public entities obtain voter approval before they develop, build, or acquire a low-rent housing project.

Basic Construction Need. StanCOG projection of the number of housing units that will need to be constructed to adequately house a city's projected future number of households for a specified forecast time period. Includes the Basic Replacement Need.

Basic Replacement Need. StanCOG projection of the number of housing units needed to replace demolished units, units converted to non-residential uses, and non-planned losses from fire, earthquakes, and other natural phenomena for a specified forecast time period.

Berm. A mound of earth, usually linear, used as a sight or sound barrier.

Buildout. That level of urban development characterized by full occupancy of all developable sites in accordance with the General Plan; the maximum level of development envisioned by the City's General Plan. Buildout estimates do not assume that each parcel is developed to include all floor area or housing units possible under zoning regulations.

Cardinal Directions. The four principal directions on a compass: north, south, east, and west.

CDBG. Federal Community Development Block Grant.

CEQA. California Environmental Quality Act, 1979.

CHHWC. Countywide Household Hazardous Waste Collection Program.

CHWMP. Stanislaus County Hazardous Waste Management Plan, June 1991.

City. The City of Turlock.

CIWMP. Countywide Integrated Waste Management Plan.

CMP. Stanislaus County Congestion Management Program.

CNDDB. California Natural Diversity Data Base.

CNEL. The Community Noise Equivalent Level, a 24-hour energy equivalent level derived from a variety of single-noise events, with weighting factors of 5 and 10 dB applied to the evening (7:00 to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) periods, respectively, to allow for the greater sensitivity to noise during those hours.

Day-Night Average Sound Level (Ldn). The A-weighted average sound level for a given area (measured in decibels) during a 24-hour period with a 10 dB weighting applied to nighttime sound levels. The Ldn is approximately numerically equal to the CNEL for most environmental settings.

Decibel (dB). A unit used to express the relative intensity of a sound as it is heard by the human ear. The decibel measuring scale is logarithmic. Zero (0 dB) on the scale is the lowest sound level that a normal ear can detect under very quiet ("laboratory") conditions and is referred to as the "threshold" of human hearing. On the logarithmic scale, 10 decibels are 10 times more intense, 20 decibels are 100 times more intense, and 30 decibels are 1,000 times more intense than 1 decibel. See also Decibel "A-Weighted."

Decibel "A-Weighted" (dBA). The scale for measuring sound in decibels that weights or reduces the effects of low and high frequencies in order to simulate human hearing. See also Decibel.

Density, Net. The number of dwelling units per acre of developable residential land, exclusive of public and private streets, drainage, power-transmission-line easements, or other public and semi-public uses.

Detention Basin. An area used to temporarily store storm water overflow.

Dwellings, Single-family. Single-family units that are detached from any other house with open space on all four sides.

Dwelling, Single-family attached. Single family units that are attached to other units with adjoining walls extending from ground to roof that separate it from other adjoining structures and forms a property line.

Eocene. Geologic time. The early tertiary period, the first period of the Cenozoic era, 40 to 60 million years ago.

FAR (Floor Area Ratio). The gross built floor area on a site divided by the total net area of the site, expressed in decimals to one or two places.

Farmland, of Statewide Importance. The Department of Conservation Farmland Mapping and Monitoring Program classification. Indicates farmland similar to Prime Farmland but with minor short comings such as greater slopes or less ability to store soil moisture.

Farmland, Prime. The Department of Conservation Farmland Mapping and Monitoring Program classification. Indicates farmland which has the best combination of physical and chemical features available to sustain long term production of agricultural crops.

Fault. A surface or zone of rock fracture along which there has been displacement, from a few centimeters to a few kilometers in scale.

FmHA. Farmer's Home Administration.

Grade-Separated. Set apart by a change in elevation.

Gross Acre. See Acres, Gross.

Groundwater Recharge. Replenishment of water stored beneath the earth's surface.

Holocene Age. Geologic time, extending from the end of the Pleistocene epoch (10,000 years ago) to the present.

Household. Person or persons living in one dwelling unit.

Housing Payment. For ownership housing, the mortgage payment, property taxes, and insurance and utilities. For rental housing, rent and utilities.

Income, Above-Moderate. A household whose income exceeds 120 percent of the county median.

Income, Low. A household whose income is between 50 and 80 percent of the county median.

Income, Median. The income at which half the households in the county have a higher income and half have a lower income, as defined for a four-person household by the United States Department of Housing and Urban Development and the California Department of Housing and Community Development.

Income, Moderate. A household whose income is between 81 and 120 percent of the median family income for the county.

Income, Very-Low. A household whose income does not exceed 50 percent of the median family income for the county.

Infill. The development of new housing or other buildings on scattered vacant lots in a largely built-up area.

LAFCO. Local Agency Formation Commission.

Linear Park or Parkway. A long and narrow park, usually on or along a right-of-way for some other use.

LOS. Traffic Level of Service calculated on the basis of a volume-to-capacity ratio of an intersection or street segment.

MGD. Million Gallons per Day.

Miocene Age. Geologic time, fourth epoch of the tertiary period, nine to 25 million years ago.

MSL. Mean Sea Level.

Net Acre. The area of a lot exclusive of land used or to be used for public or private streets or other rights of way.

Noise Contour(s). Isolines (a line on a map or chart along which there is a constant value) representing noise, measured in decibels. See also Community Noise Equivalent Levels.

Peak Hour Traffic. The number of vehicles passing over a designated section of a street during the busiest one-hour period during a 24-hour period.

Planning Area. The territory for which a city makes policy during the General Plan process. Not necessarily a future city boundary or a future urban area.

Right-of-Way. A strip of land occupied by a road, crosswalk, railroad, electric transmission lines, canal, water line, sanitary or storm sewer, or other similar public or semi-public use.

StanCOG. Stanislaus Council of Governments.

SCEDCO. Stanislaus County Economic Development Corporation.

SJVUAPCD. San Joaquin Valley Unified Air Pollution Control District.

Soils, Class I. Indicates soil that has no limitations in the production of field crops based on soil and climate characteristics. Part of the Land Capability Classification System which has eight categories from I (no limitations) to VIII (very limited). This classification system does not consider economic factors.

Soils, Class II. Indicates soil that has some limitations in the production of field crops based on soil and climate characteristics. Part of the Land Capability Classification System which has eight categories from I (no limitations) to VIII (very limited). This classification system does not consider economic factors.

Subdivision. The division of a lot, tract, or parcel of land into two or more lots, tracts, parcels, or other divisions of land for sale, development, or lease.

Subsidence. The gradual sinking of land as a result of natural or man-made causes.

TID. Turlock Irrigation District.

USGS. United States Geological Survey.

USGS Quadrangle. A U.S. Geological Survey-produced map showing natural and cultural features for an area extending across 15 minutes of longitude and 7.5 minutes of latitude.

Vacancy Rate. The ratio of unoccupied housing units to total housing units.

Zoning Ordinance. The city ordinance which divides Turlock into zones and establishes regulations governing the use, placement, spacing, and size of buildings, open spaces, and other facilities.